

# **INHALANTS:** Not always who or what we think!

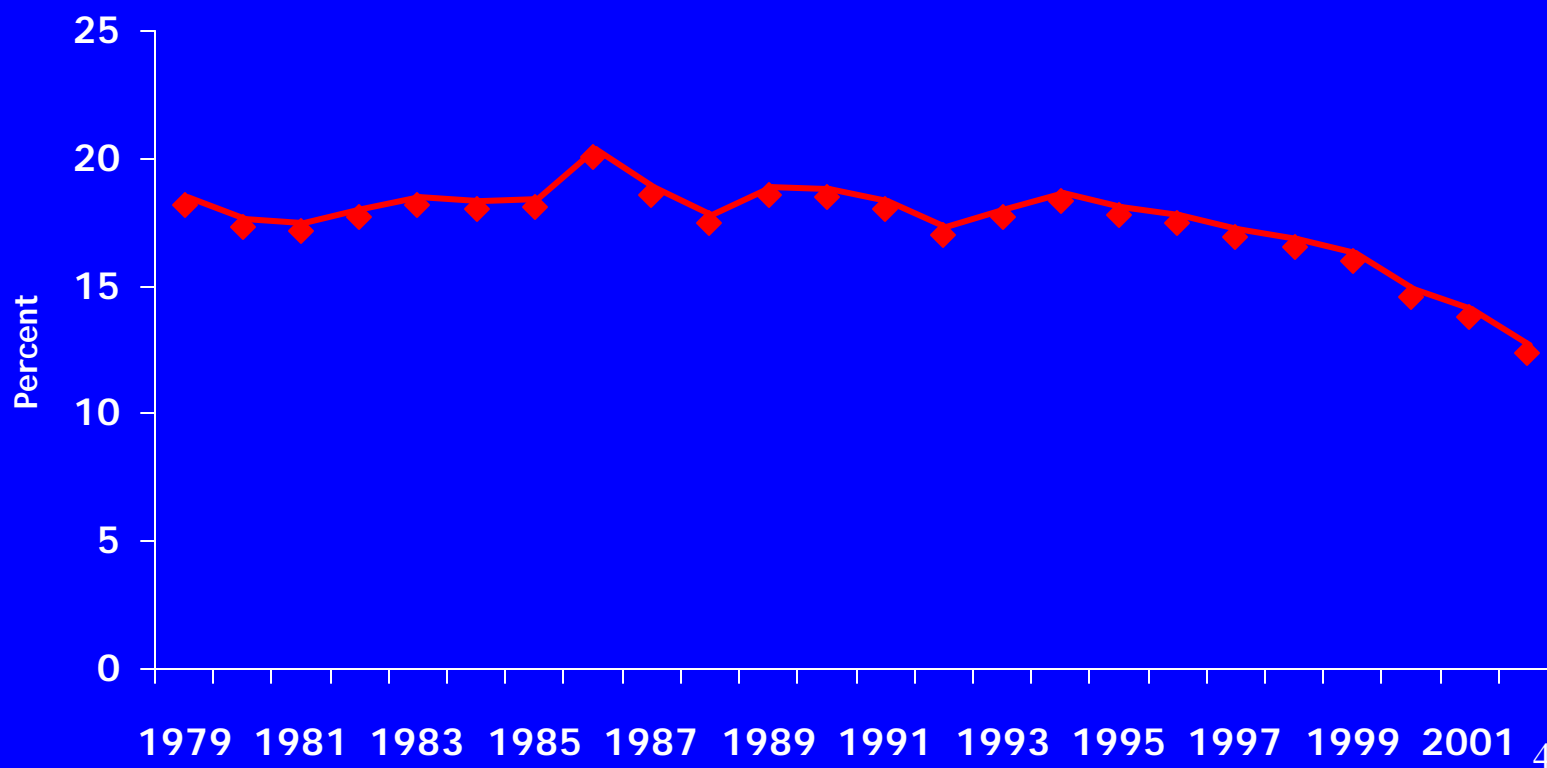
Jane C. Maxwell, Ph.D.  
Research Scientist  
Center for Social Work Research  
Gulf Coast Addiction Technology  
Transfer Center  
University of Texas at Austin

# SURVEYS

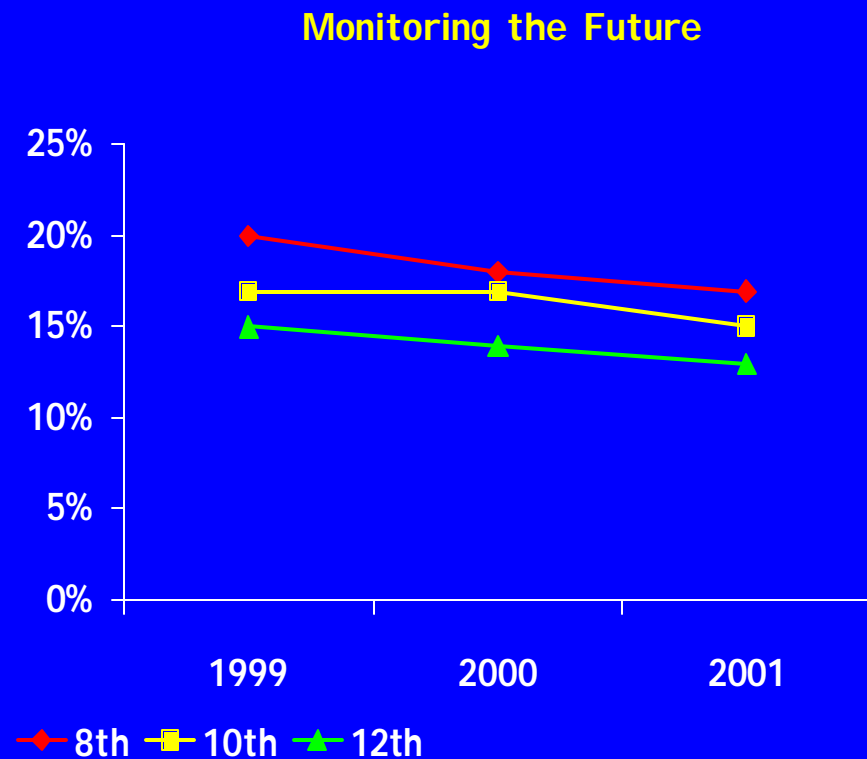
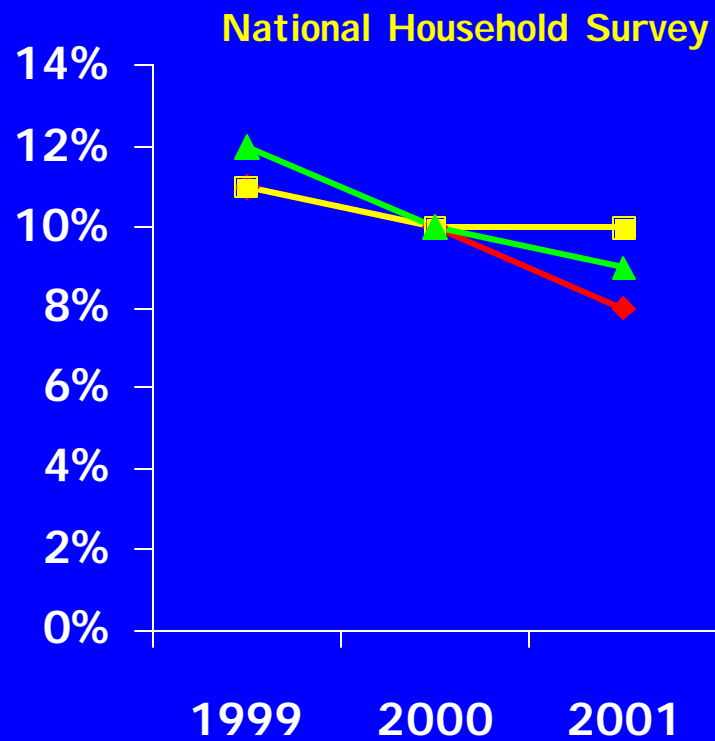
# Survey Data Sources

- Johnson LD, O'Malley PM & Bachman JG. *Monitoring the Future National Survey Results on Drug Use, 1975-2001*. NI DA, 2002.
- Office of Applied Studies. *Summary of Findings from 2001 National Household Survey on Drug Abuse: Vol. II*, SAMHSA
- Liu LY. *2002 Texas School Survey of Substance Use Among Students: Grades 7-12*. Austin: TCADA, 2003.
- Liu LY & Maxwell JC. *2000 Texas School Survey of Substance Use Among Students: Grades 7-12*. Austin: TCADA, 2001.
- Liu LY Maxwell JC & Wallisch LS. *2000 Texas School Survey of Substance Use Among Students: Grades 4-6*. Austin: TCADA 2001.
- Wallisch LS & Kerber L. *Substance Use and Delinquency Among Youths Entering Texas Youth Commission Facilities: 2000-2001*. Austin: TCADA 2001.
- Office of Applied Studies. "Inhalant Use Among Youths, NHSDA Report, March 22, 2002.

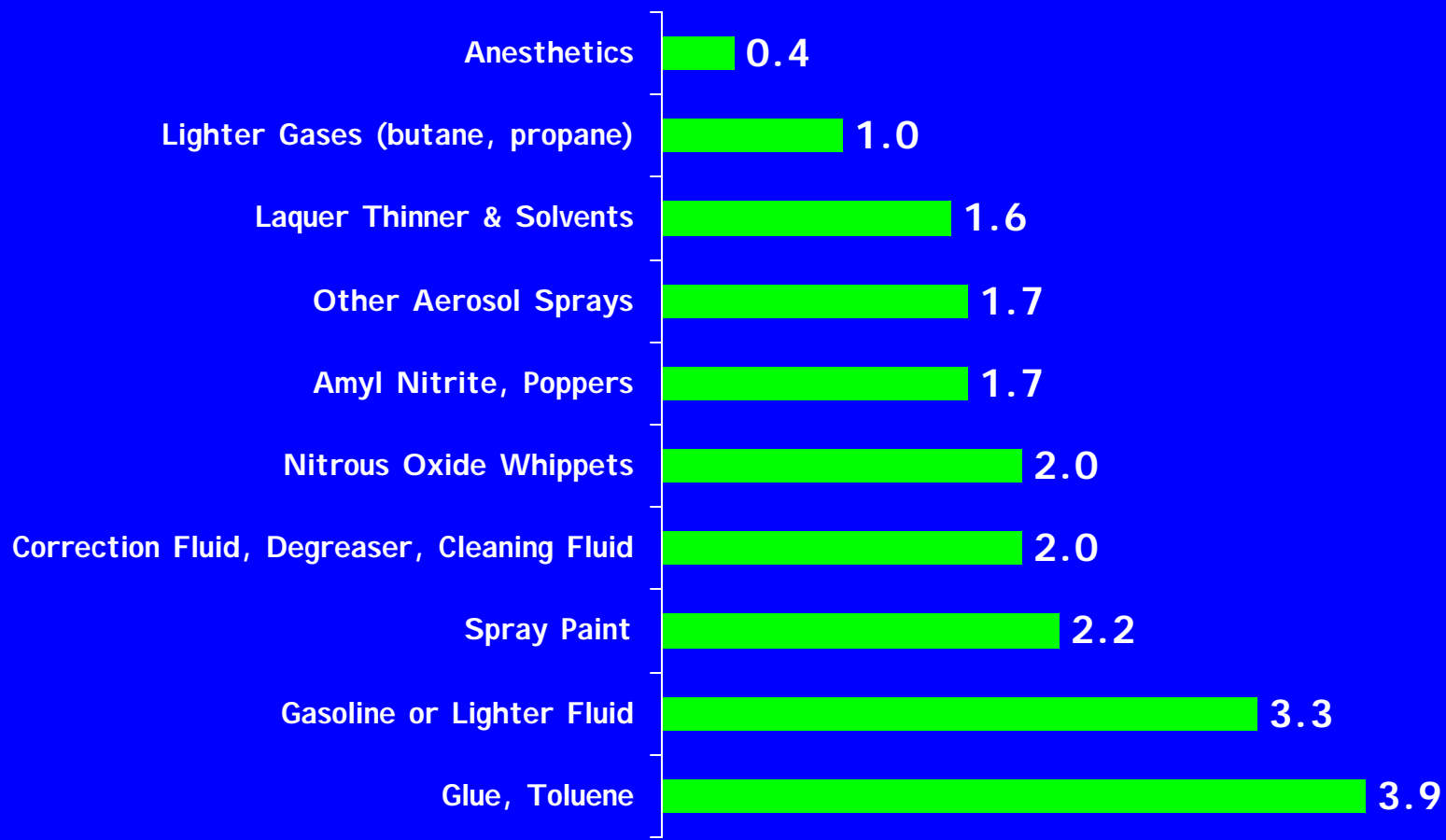
# Lifetime Use of Inhalants for 12<sup>th</sup> Graders: Monitoring the Future Survey: 1979-2001



# Comparison of Findings of Lifetime Use of Inhalants from NHSDA & MTF: 1999-2001

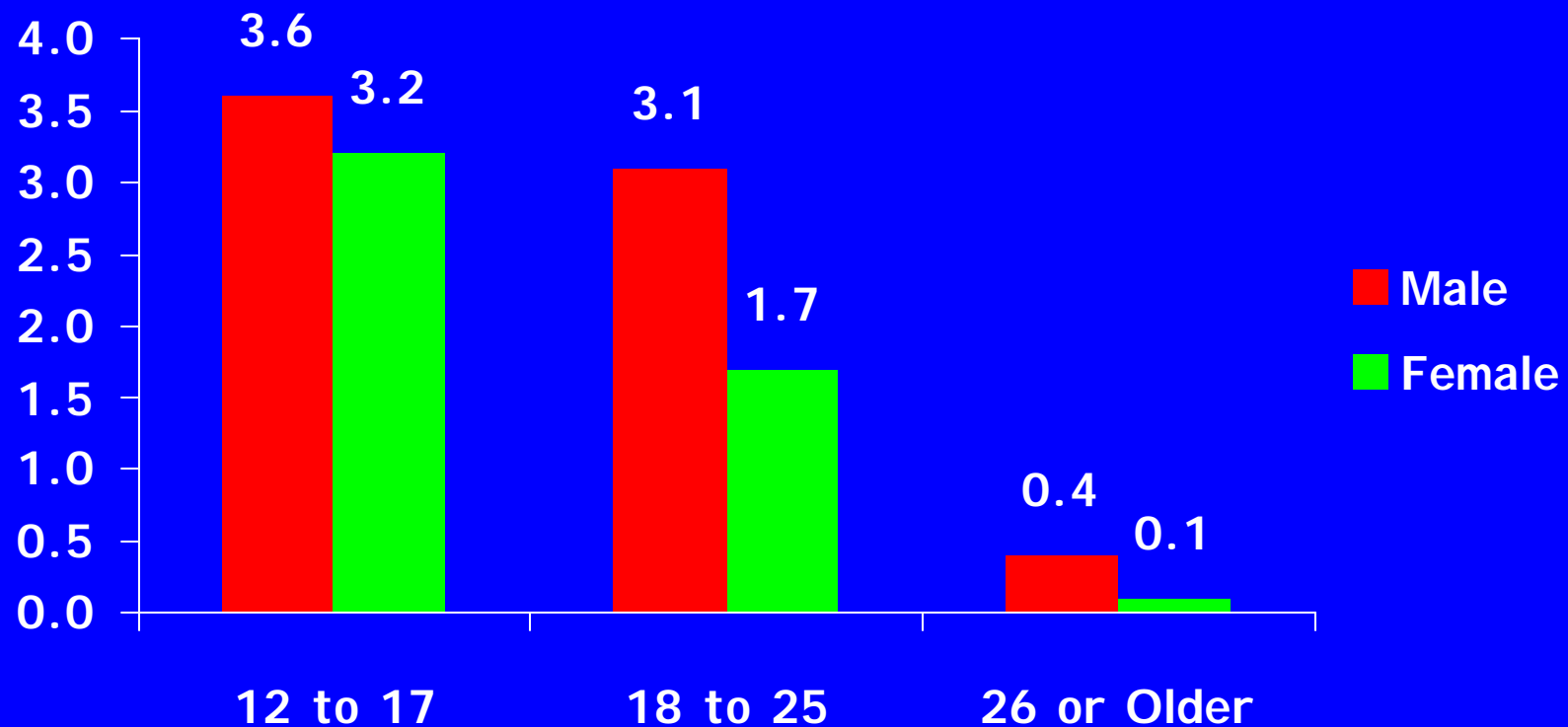


# % Youths 12-17 Reporting Lifetime Inhalant Use by Type: NHSDA 2000

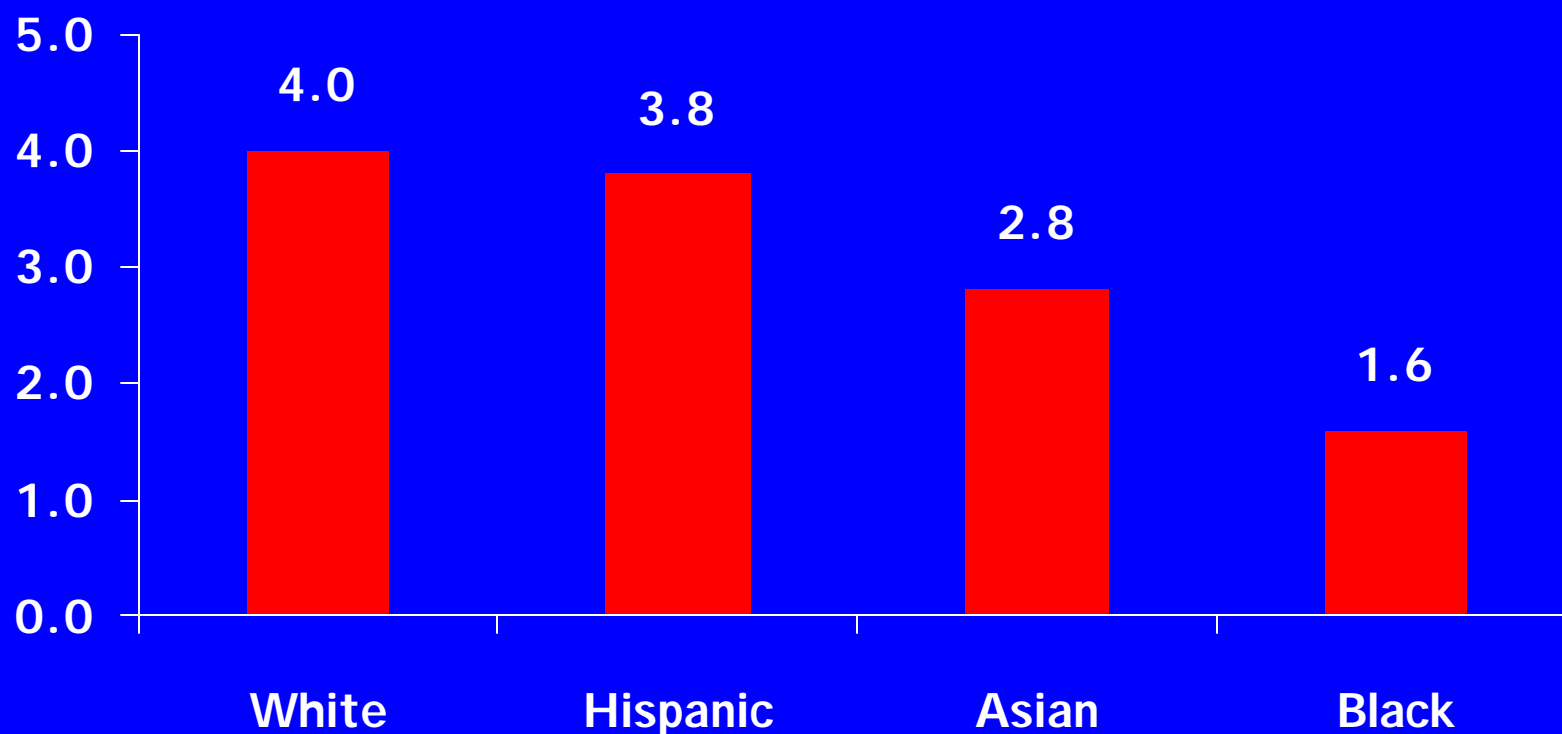


"Inhalant Use Among Youths," The NHSDA Report, March 22, 2002.

# **% Persons Reporting Past Year Inhalant Use: NHSDA 2000**

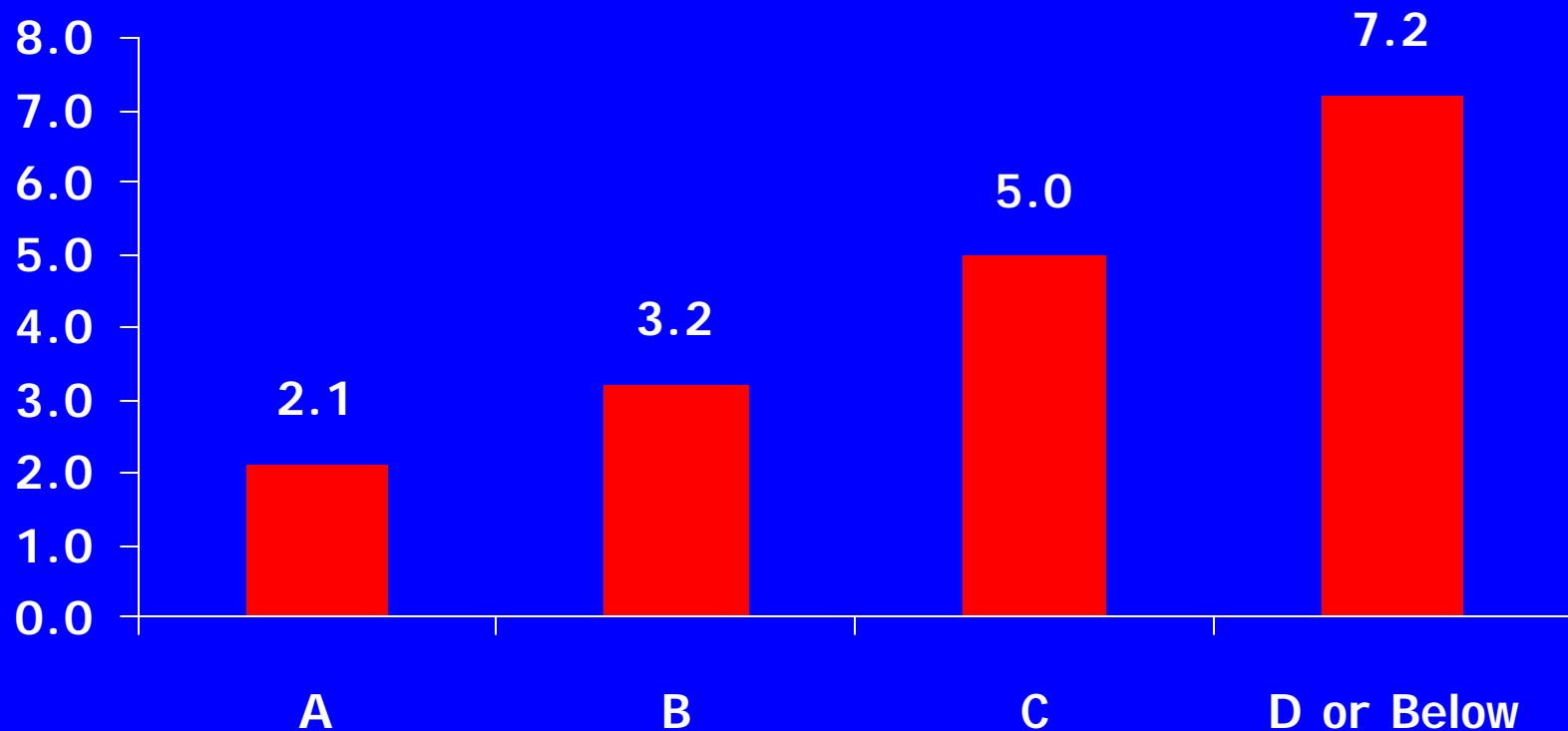


# **% Youths 12-17 Reporting Past Year Inhalant Use: NHSDA 2000**

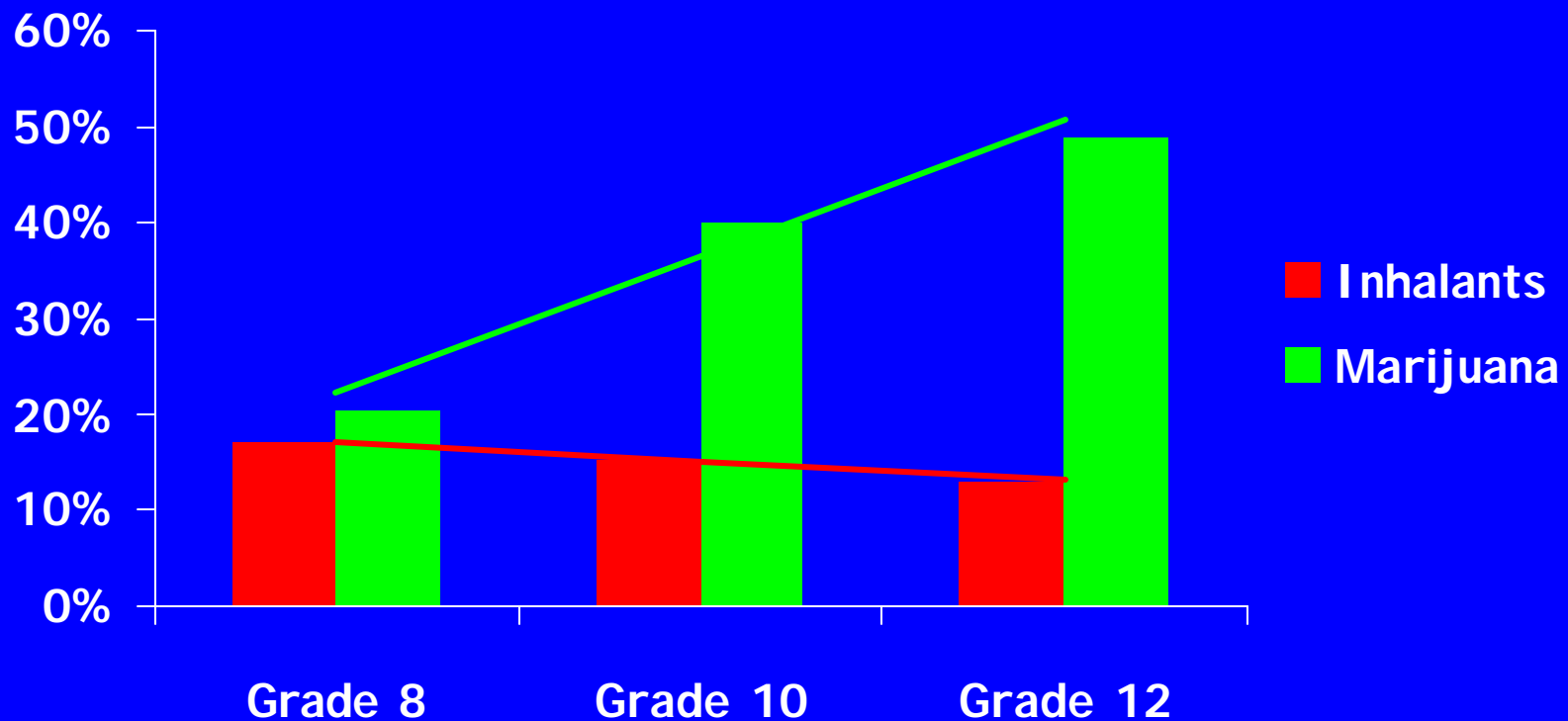




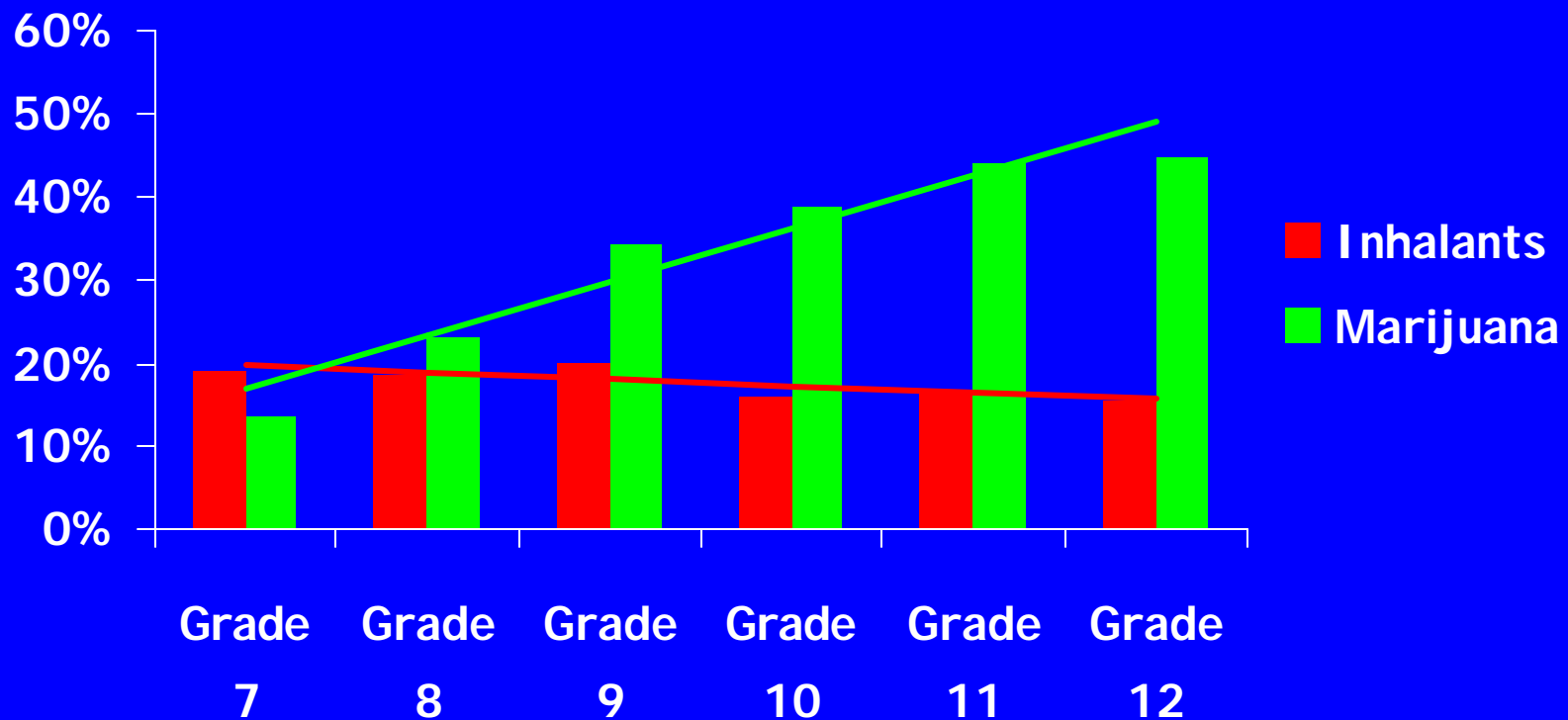
# **% Youths 12-17 Reporting Past Year Inhalant Use by Average Grade for Last Semester or Grading Period Completed: NHSDA 2000**



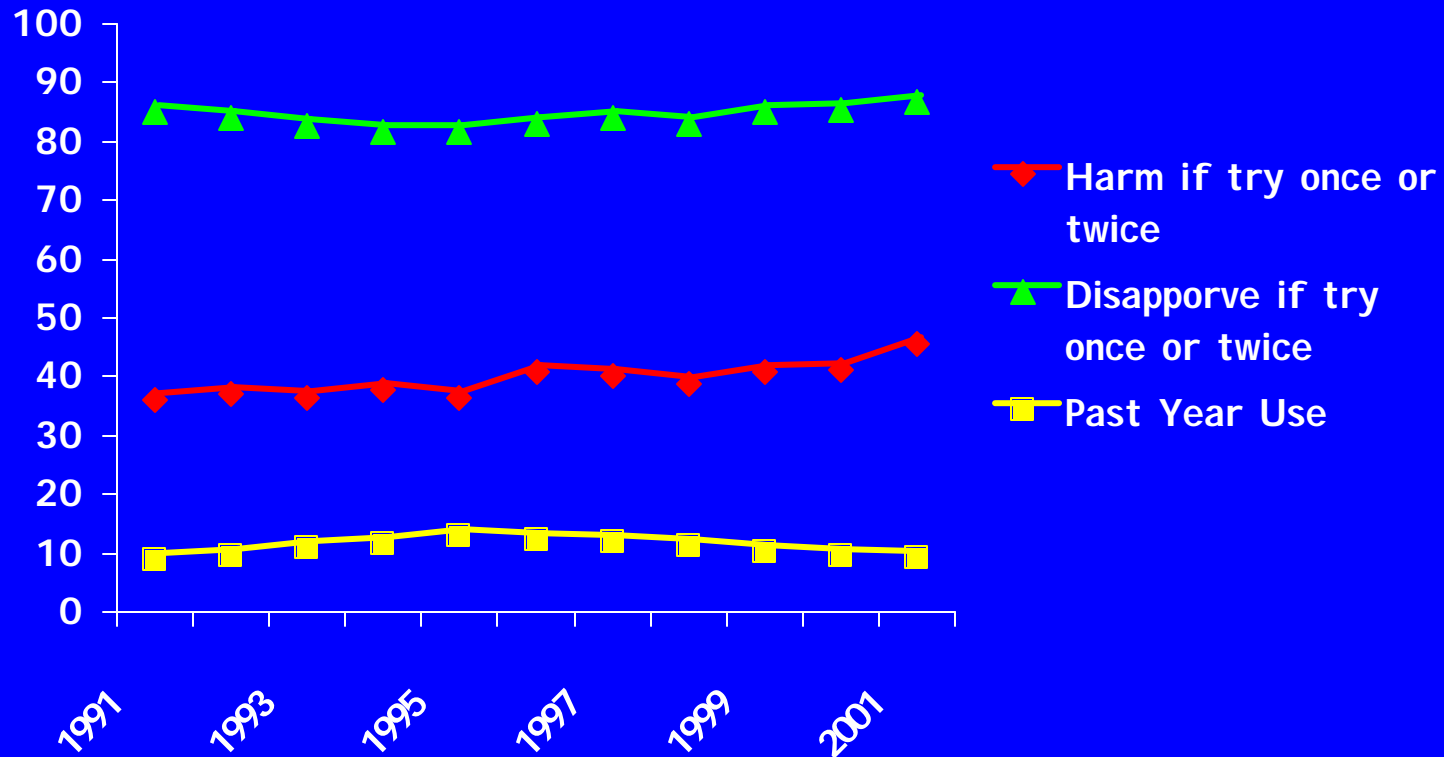
# % Students Who Had Ever Used Inhalants or Marijuana by Grade: Monitoring the Future 2001



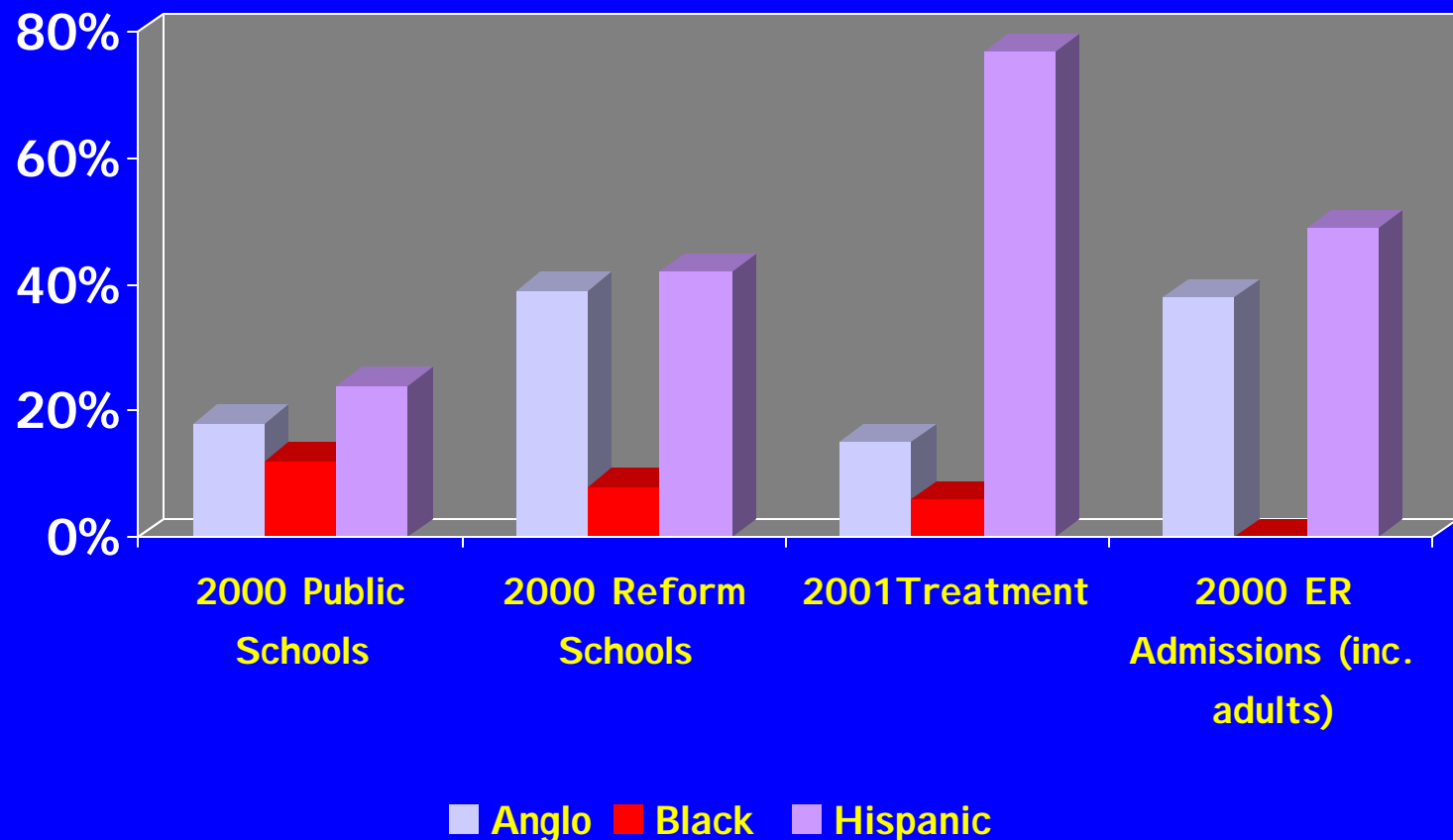
# **% Texas Secondary Students Who Had Ever Used Inhalants or Marijuana by Grade: 2002**



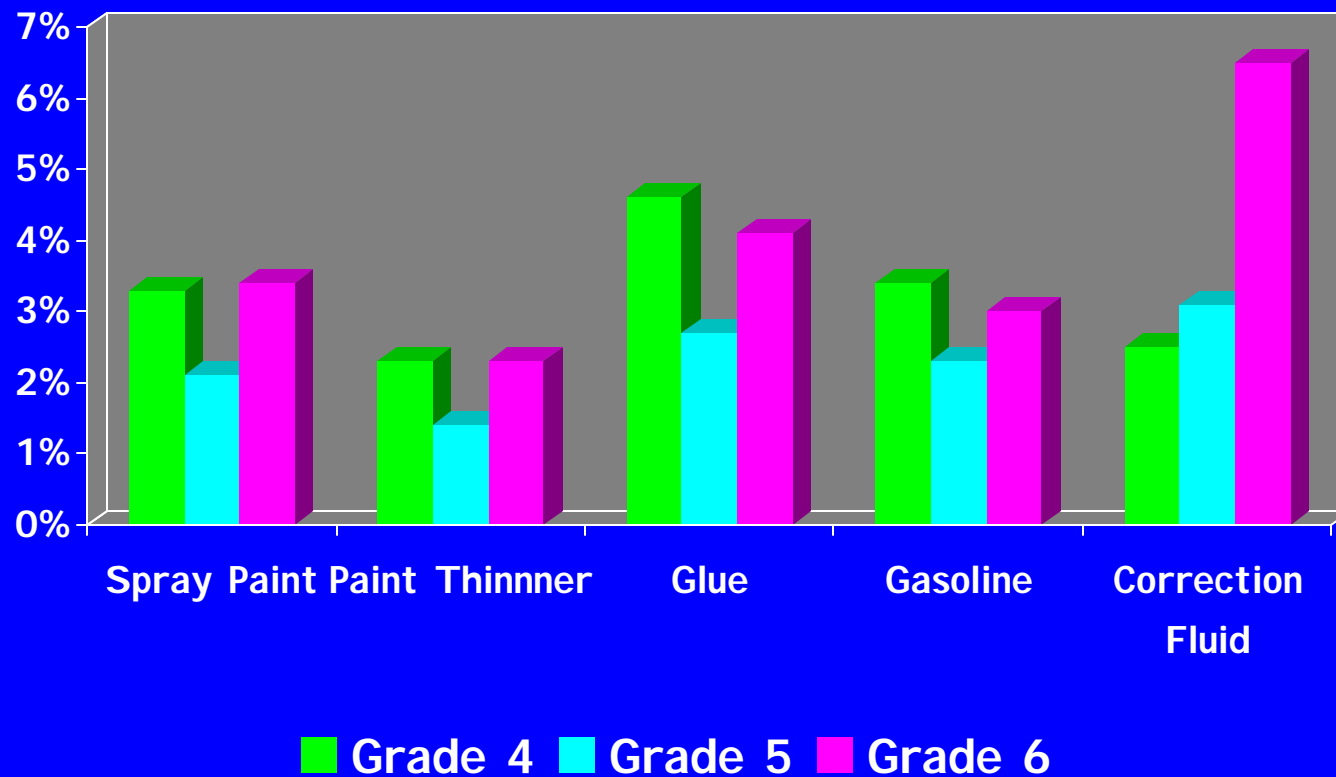
# Trends in Use, Risk & Disapproval of Inhalants by 8<sup>th</sup> Graders: MTF 2001



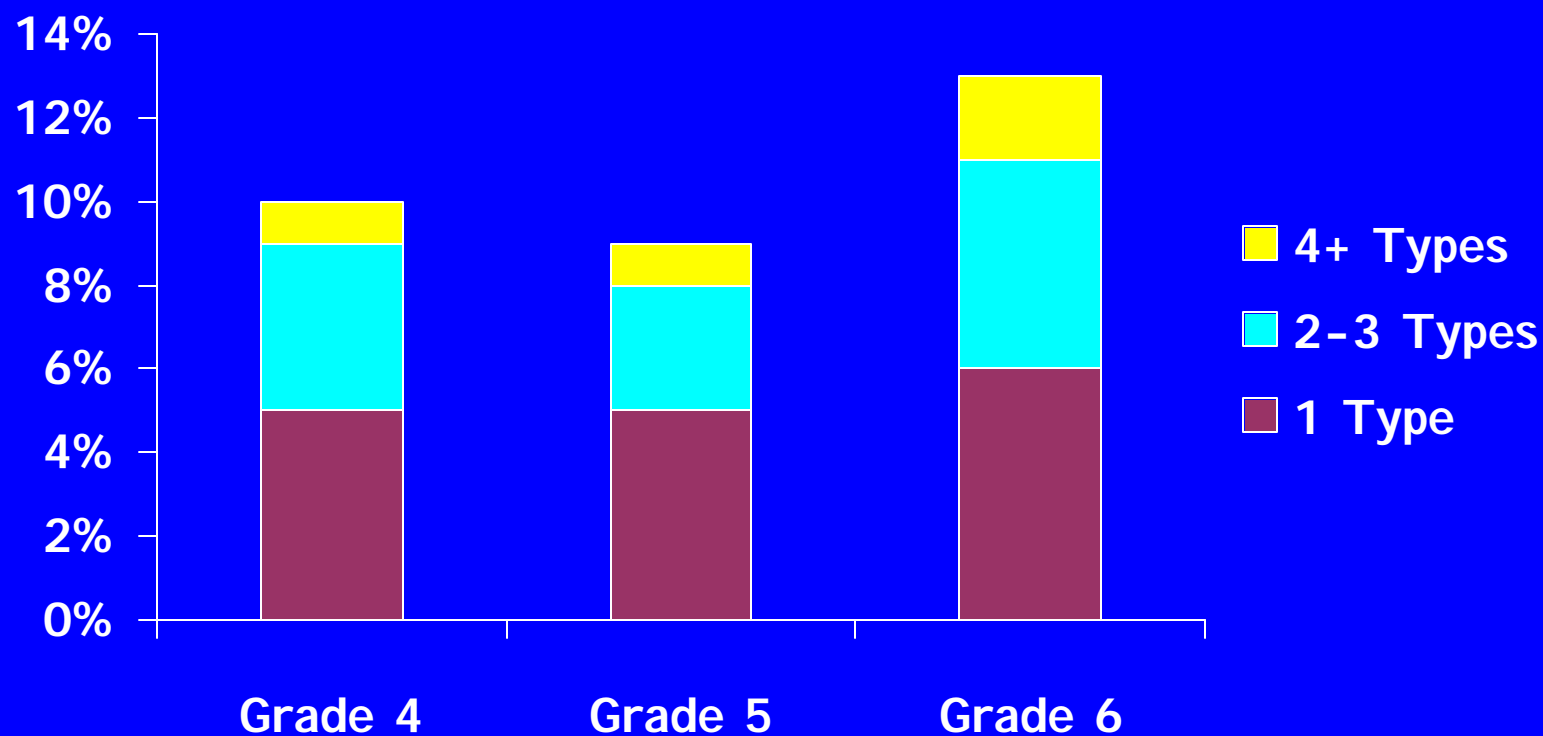
# Inhalant Use by Race/Ethnicity: Texas Secondary Students, Reform School Students, Youth Treatment and Emergency Room Admissions



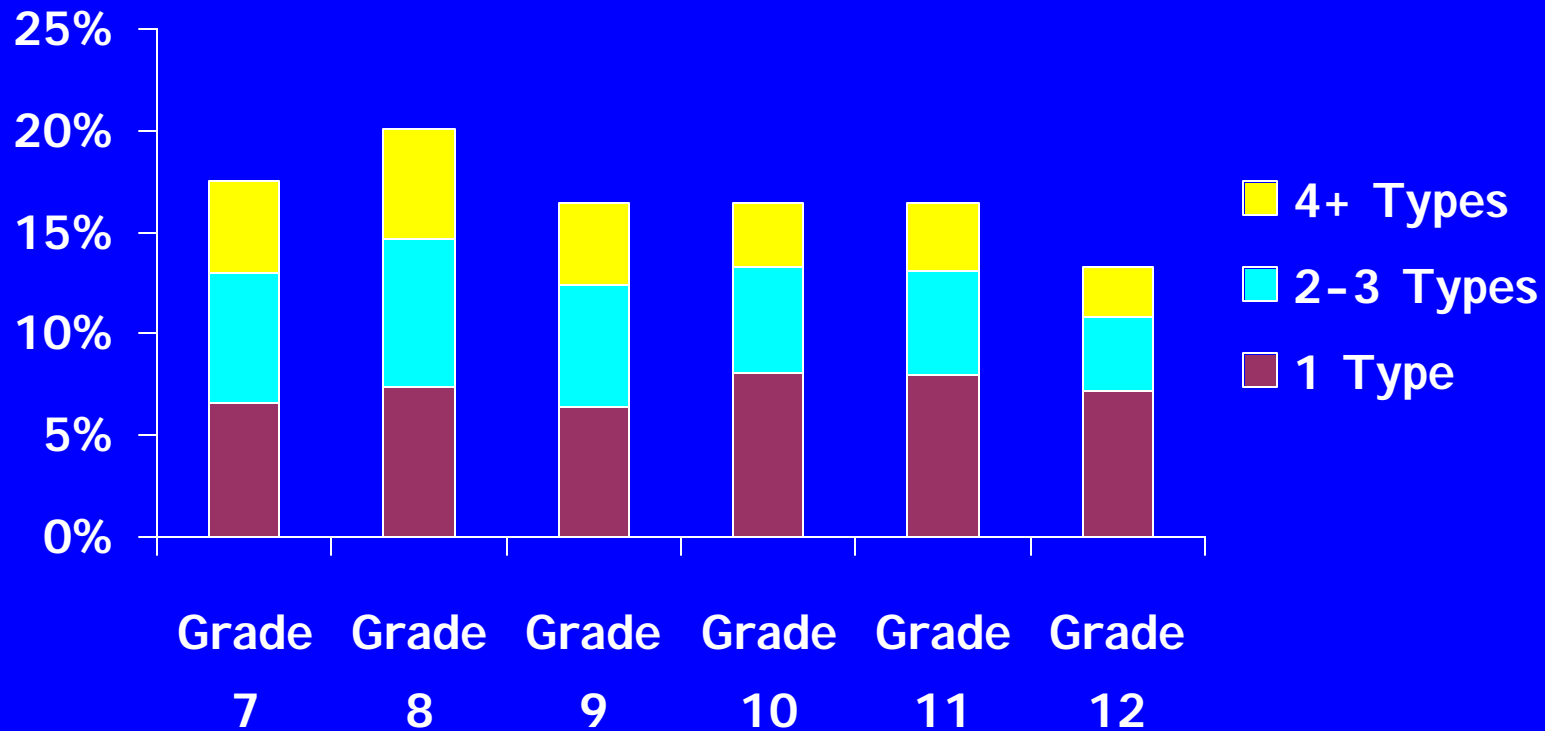
# Percentage of Texas Elementary Students Who Had Ever Used Specific Inhalants, by Grade: 2000



## Percentage of Texas Elementary Students Who Had Ever Used Inhalants, by Grade and Number of Different Inhalant Types Used: 2000

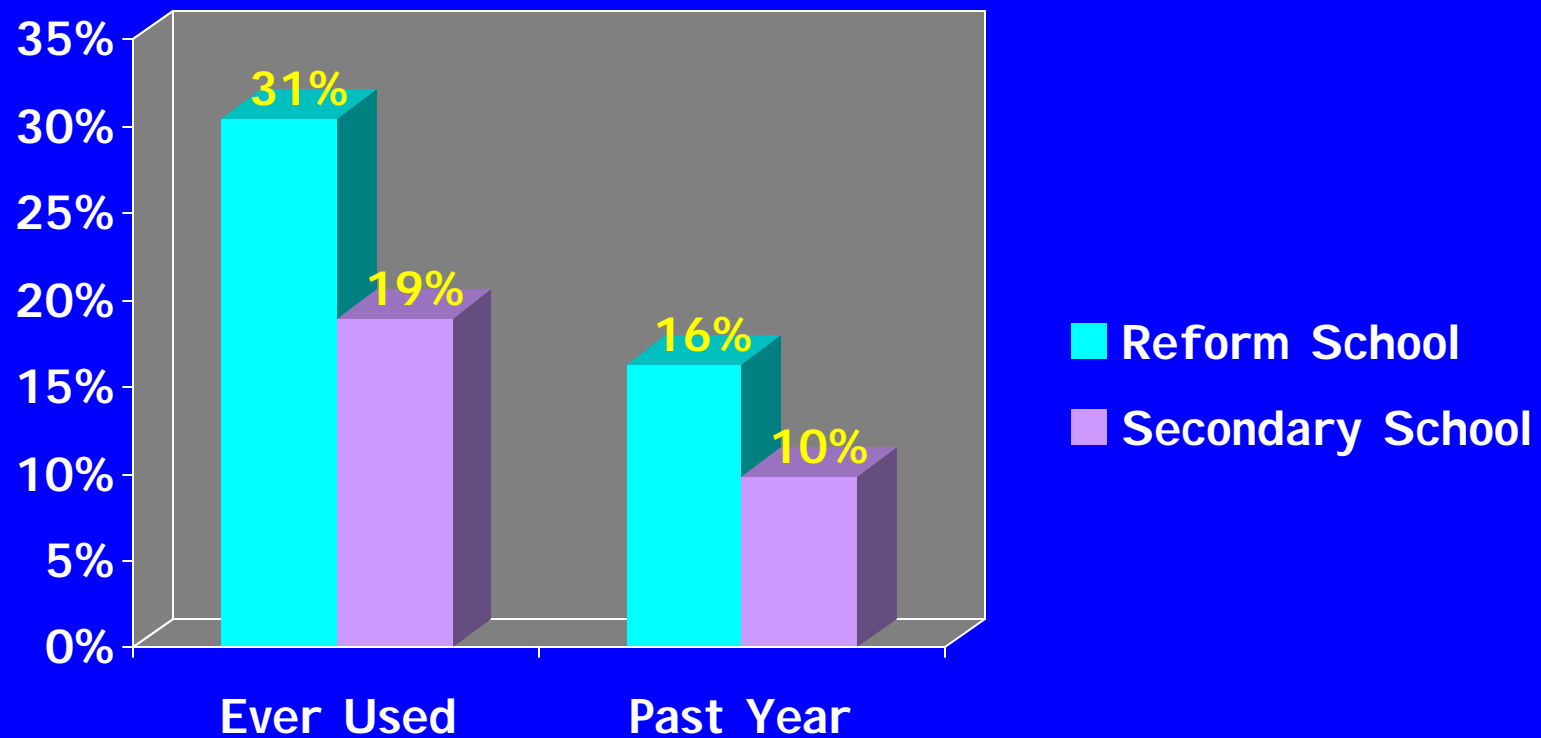


# Percentage of Texas Secondary Students Who Had Ever Used Inhalants, by Grade and Number of Different Inhalant Types Used: 2000

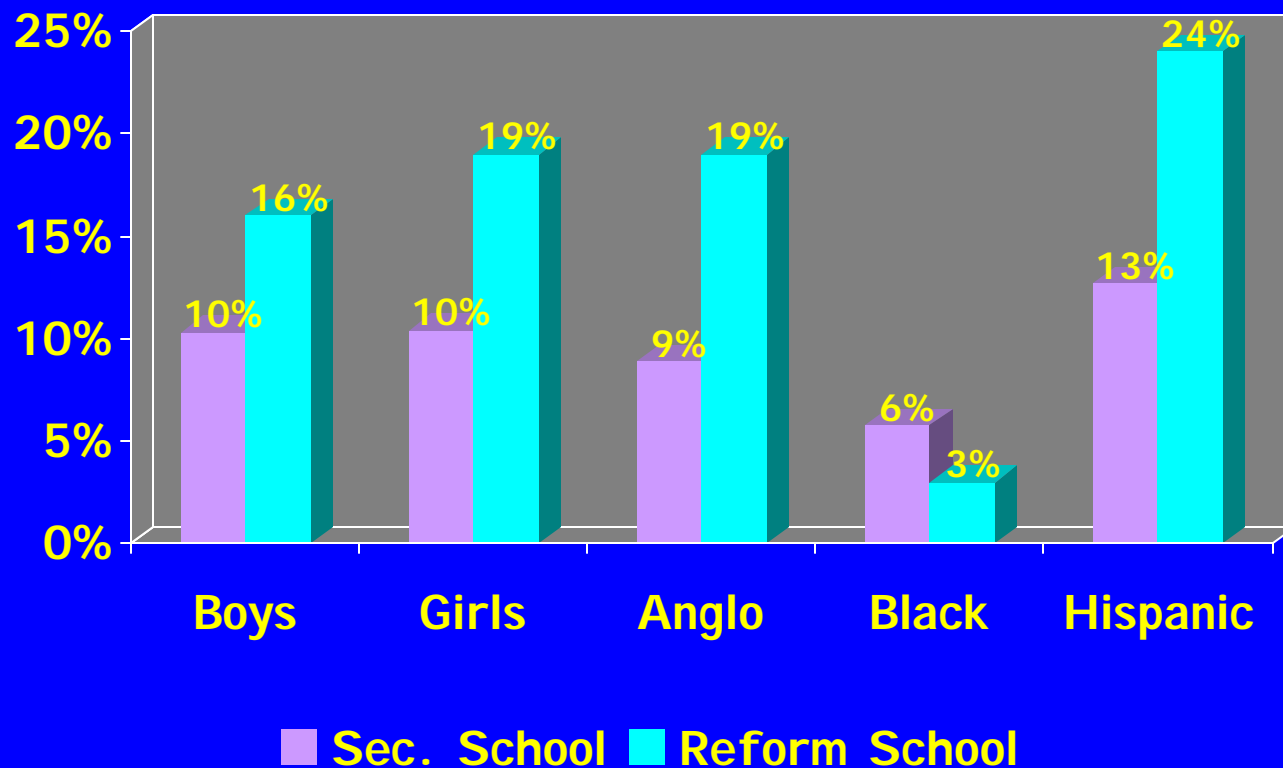




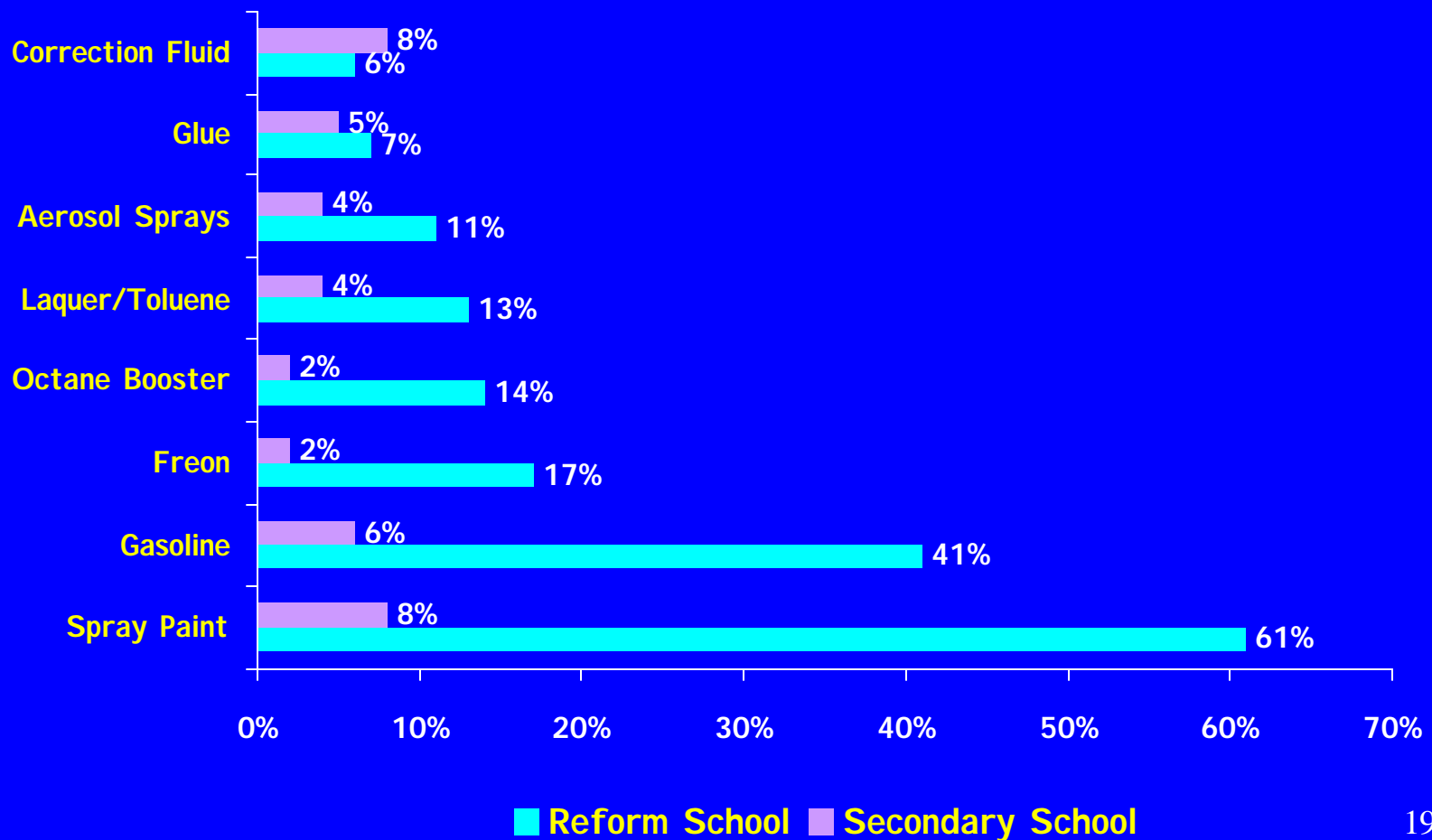
# Use of Inhalants: Texas Reform and Secondary School Surveys: 2000 & 2001



# Past Year Use of Inhalants: Texas Secondary and Reform School Students: 2000-2001

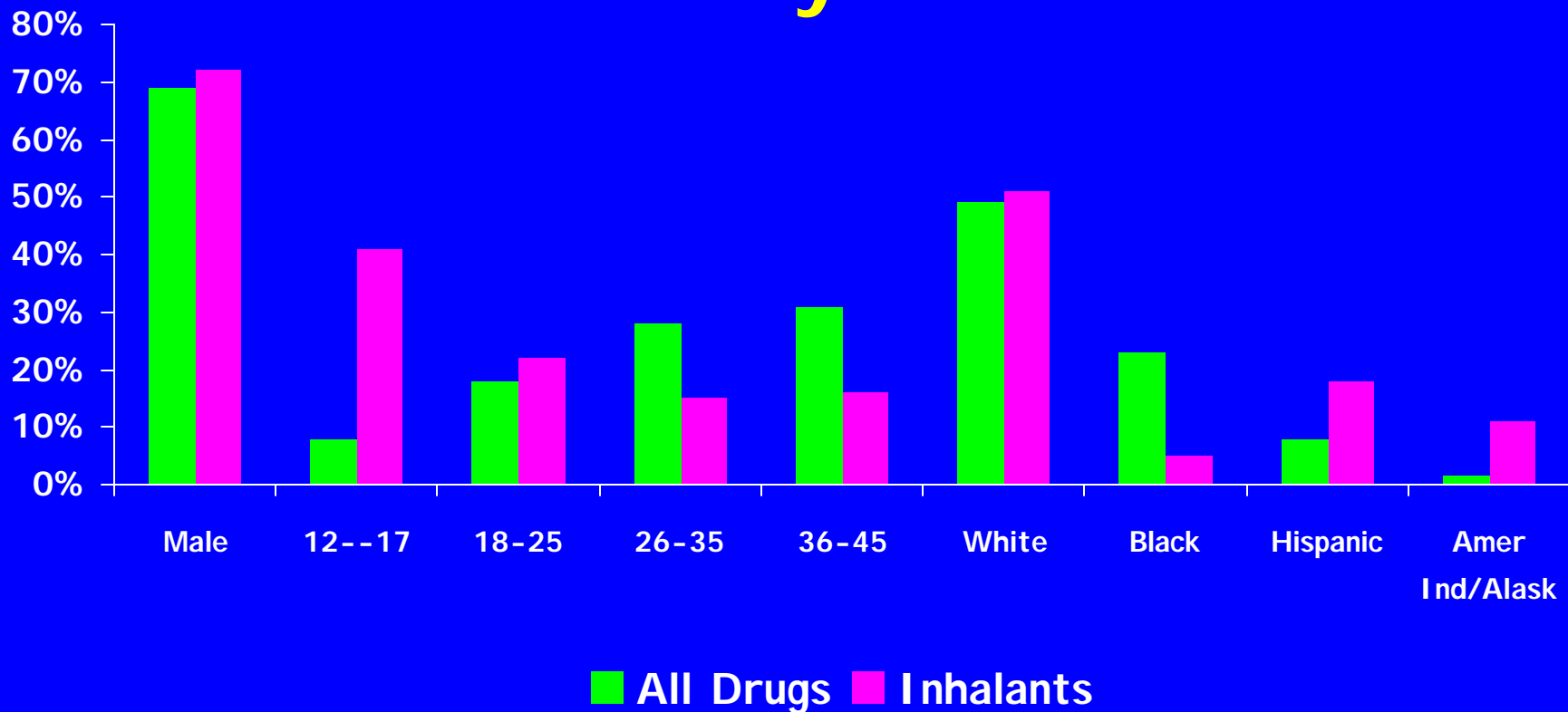


# % Texas Reform & Secondary School Students Who Had Ever Used Specific Inhalants: 2000-2001

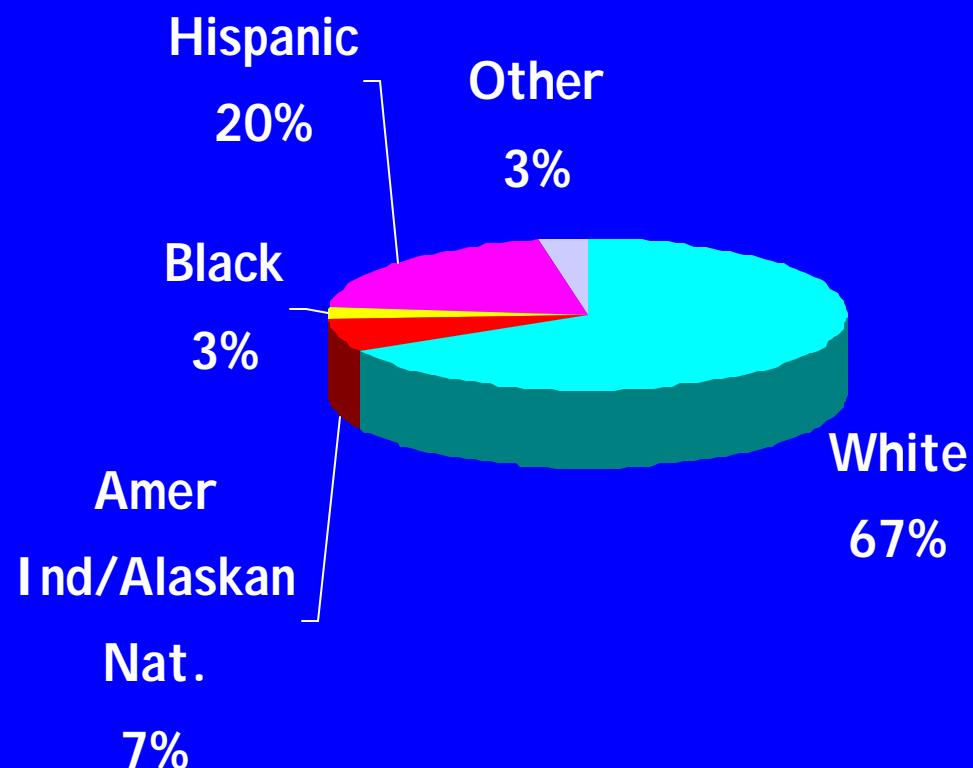


# TREATMENT ADMISSIONS

# Characteristics of All Clients Admitted to Treatment Nationally: 2000



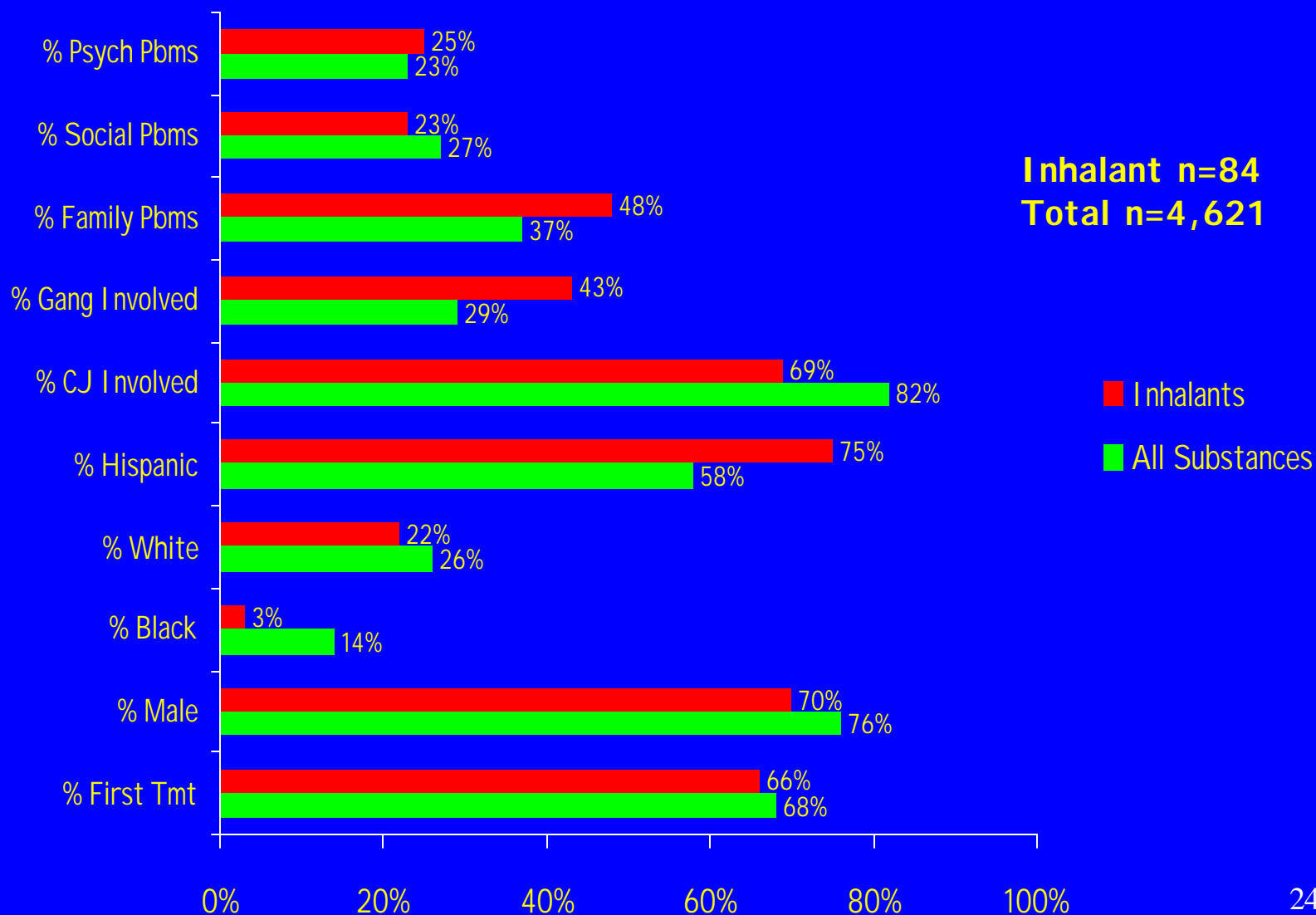
# Adolescent Inhalant Admissions by Race/Ethnicity: National 1999



# Alcohol or Drug Use Among Adolescent Inhalant Admissions: 1999

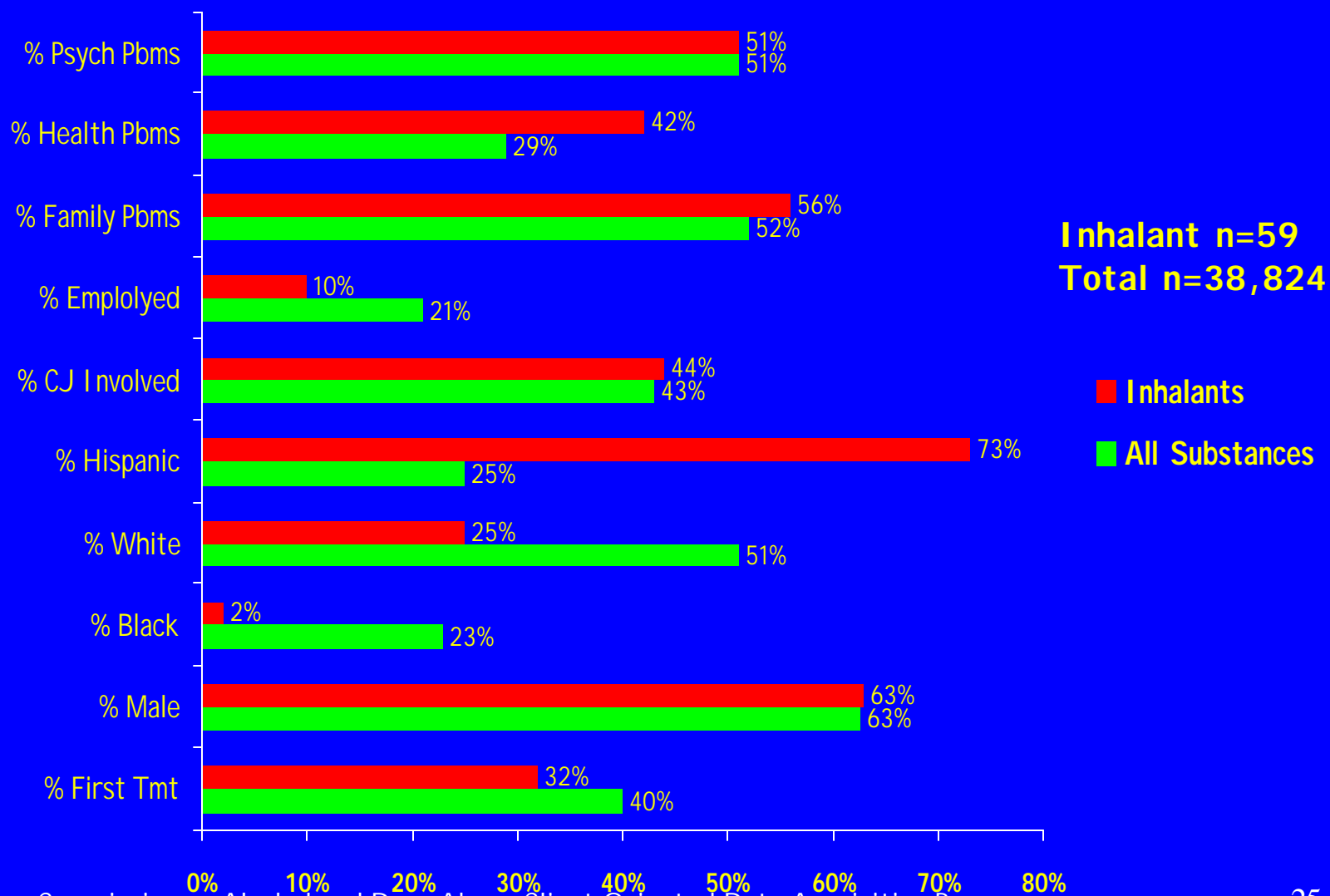
Both Alcohol and Marijuana	54%
Marijuana Only	12%
Marijuana & Drug Other than Alcohol	12%
Alcohol Only	6%
Alcohol & Drug Other than Marijuana	4%
Other Drugs/Drug Combinations	3%
Used Inhalants Only	9%

# Youth Admissions to TCADA Treatment: 2002



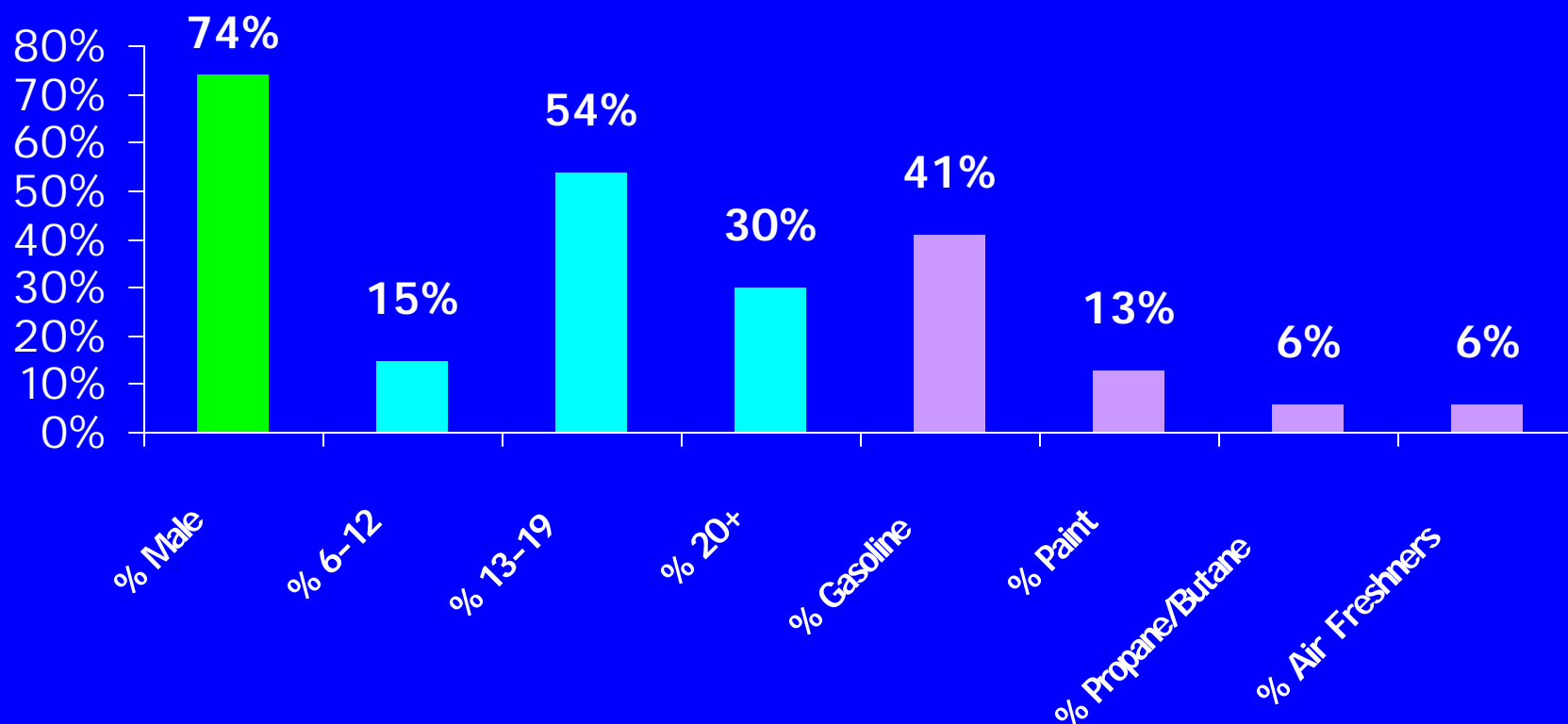


# Adult Admissions to TCADA Treatment: 2002



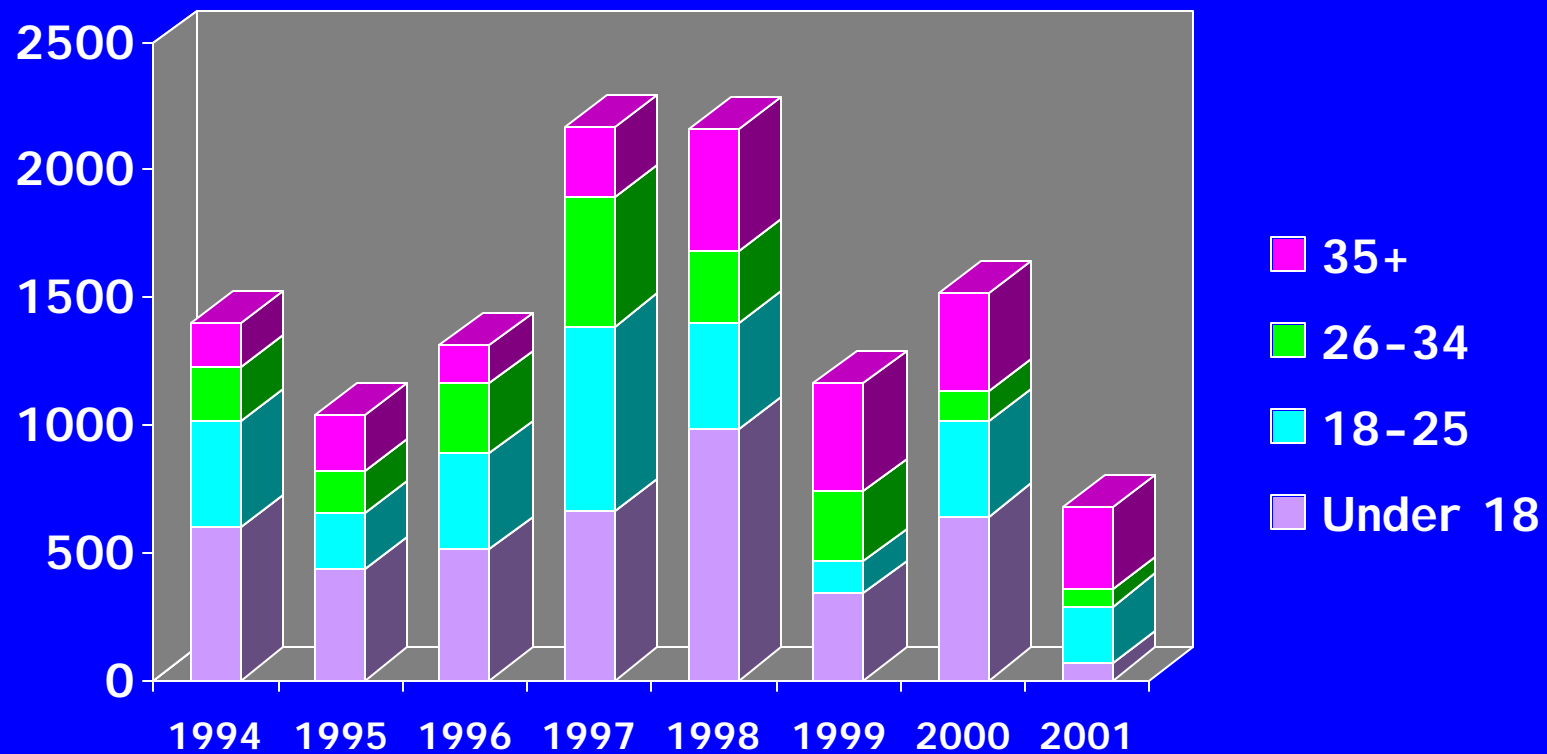
# POISON CONTROL CENTERS

# National Toxic Exposure Surveillance System Inhalant Exposure Cases: 1996-2001

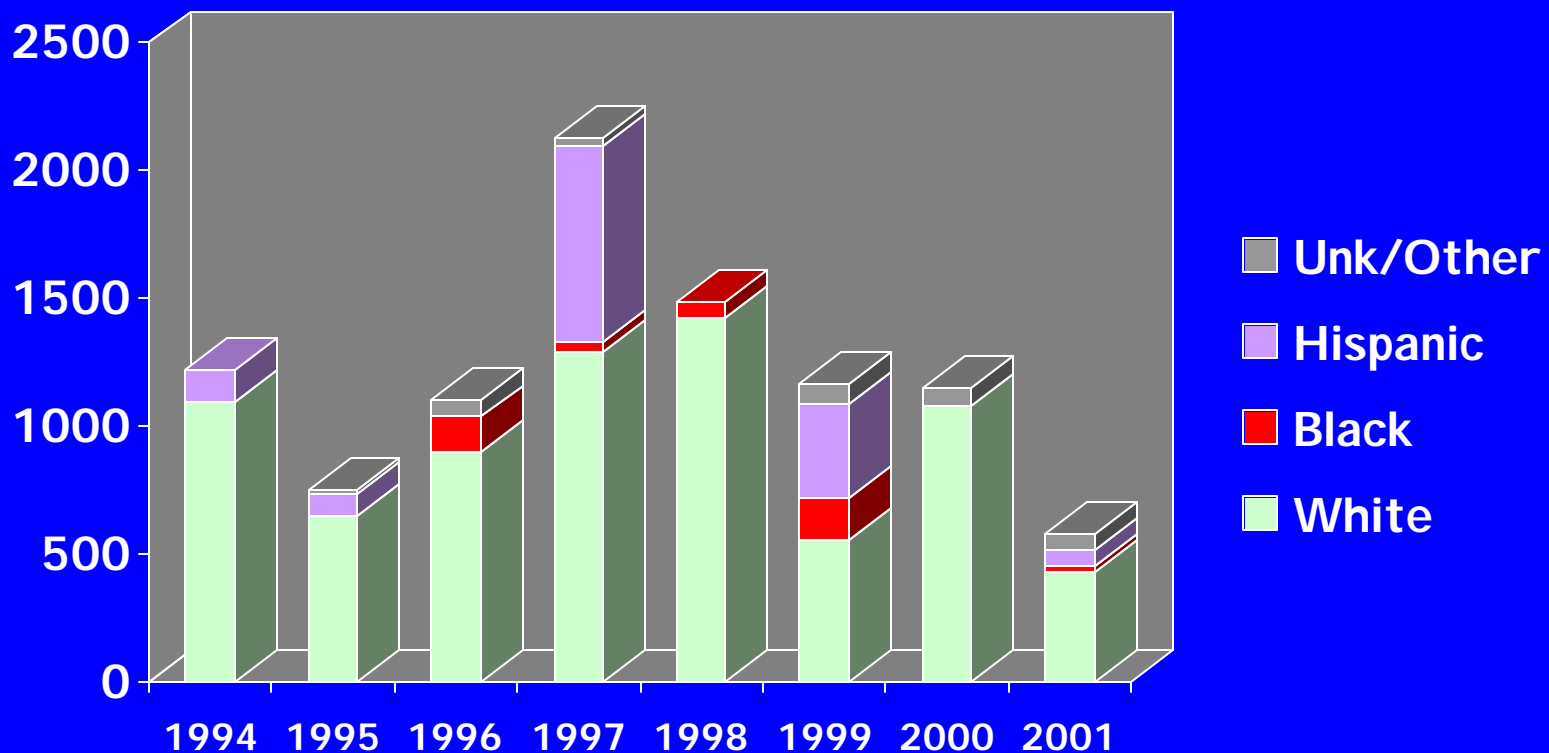


# **EMERGENCY ROOM DATA (DAWN)**

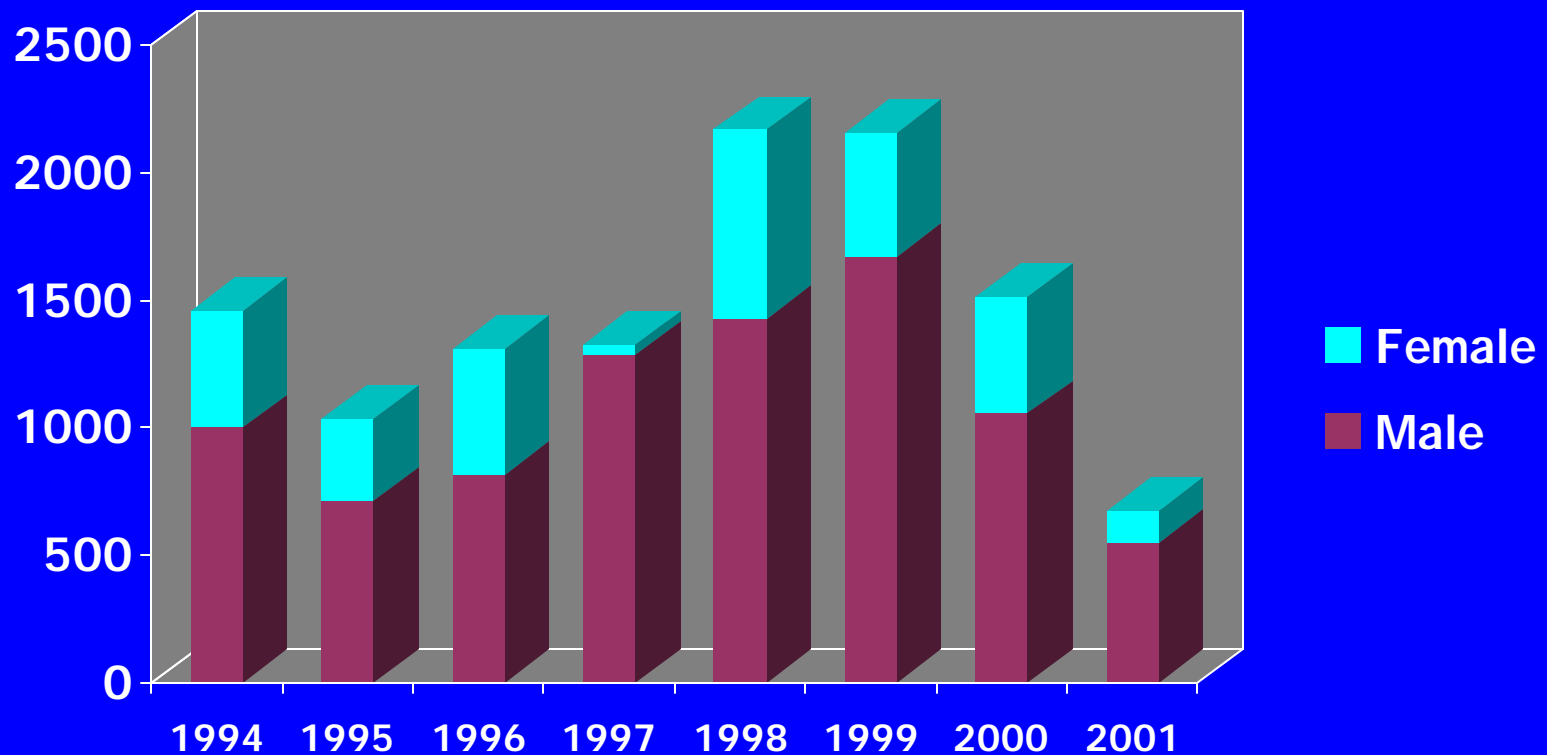
# US DAWN ED Mentions of Inhalants by Age Groups: 1994-2001



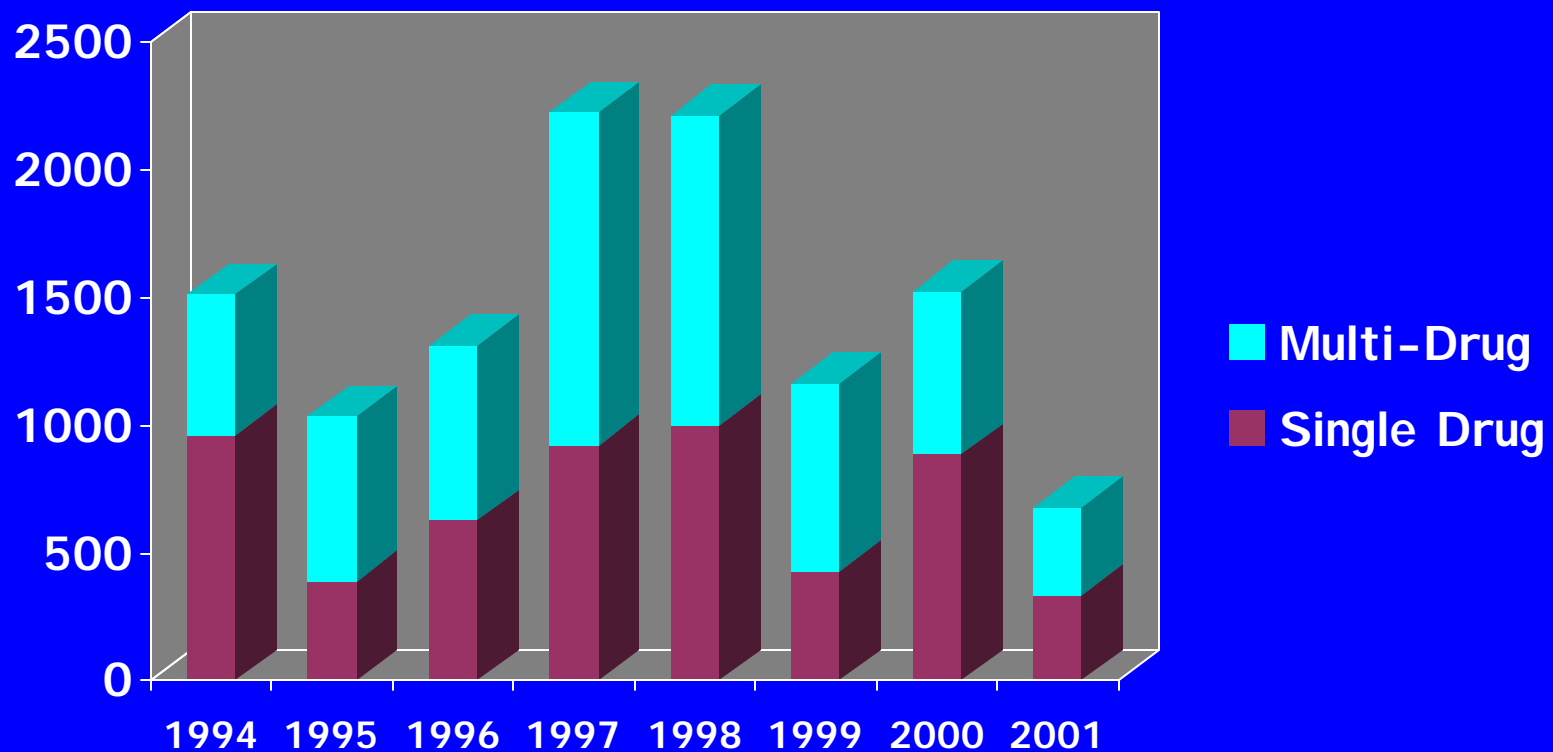
# US DAWN ED Mentions of Inhalants by Race/Ethnicity: 1994-2001



# US DAWN ED Mentions of Inhalants by Gender: 1994-2001

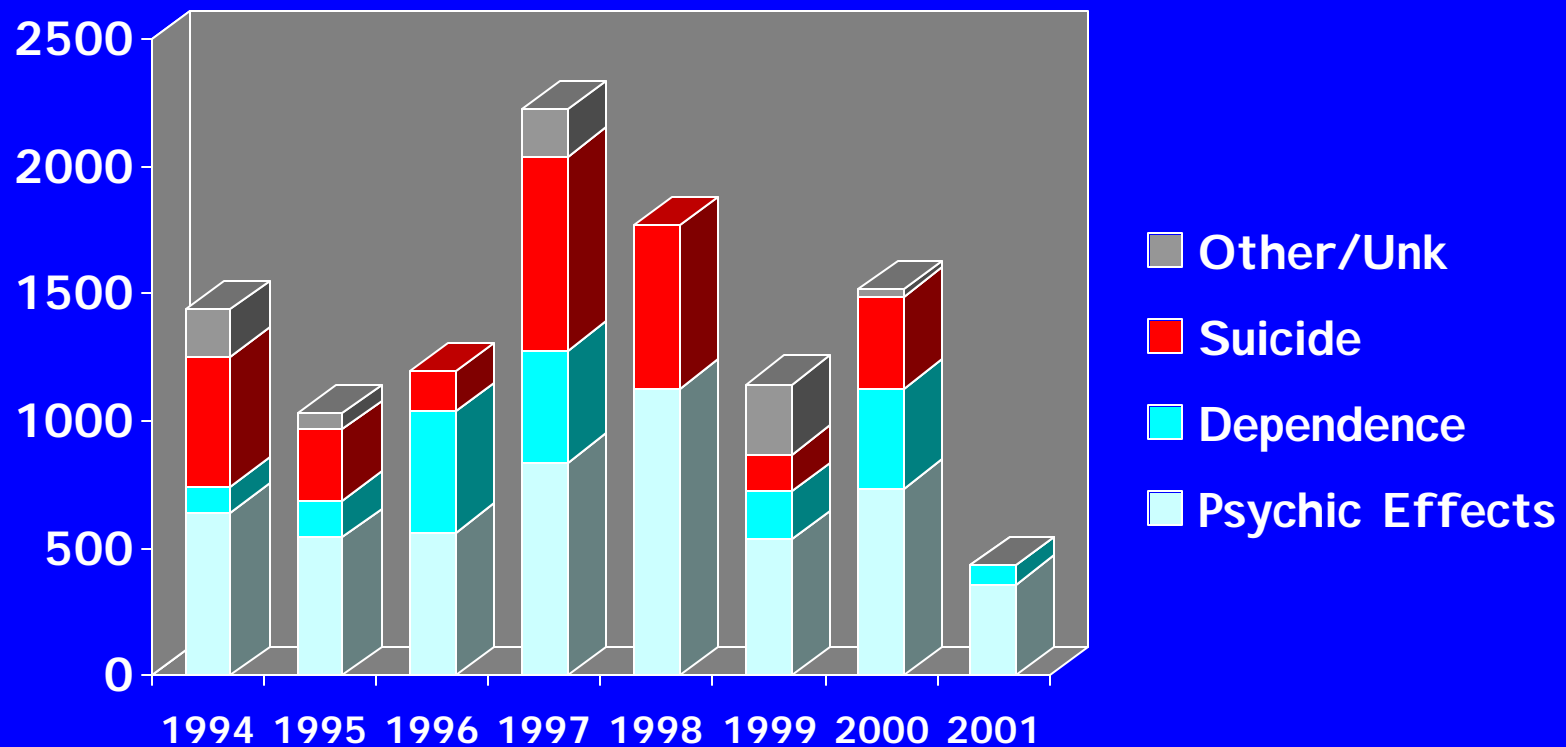


# US DAWN ED Mentions of Inhalants by Drug Concomitance: 1994-2001



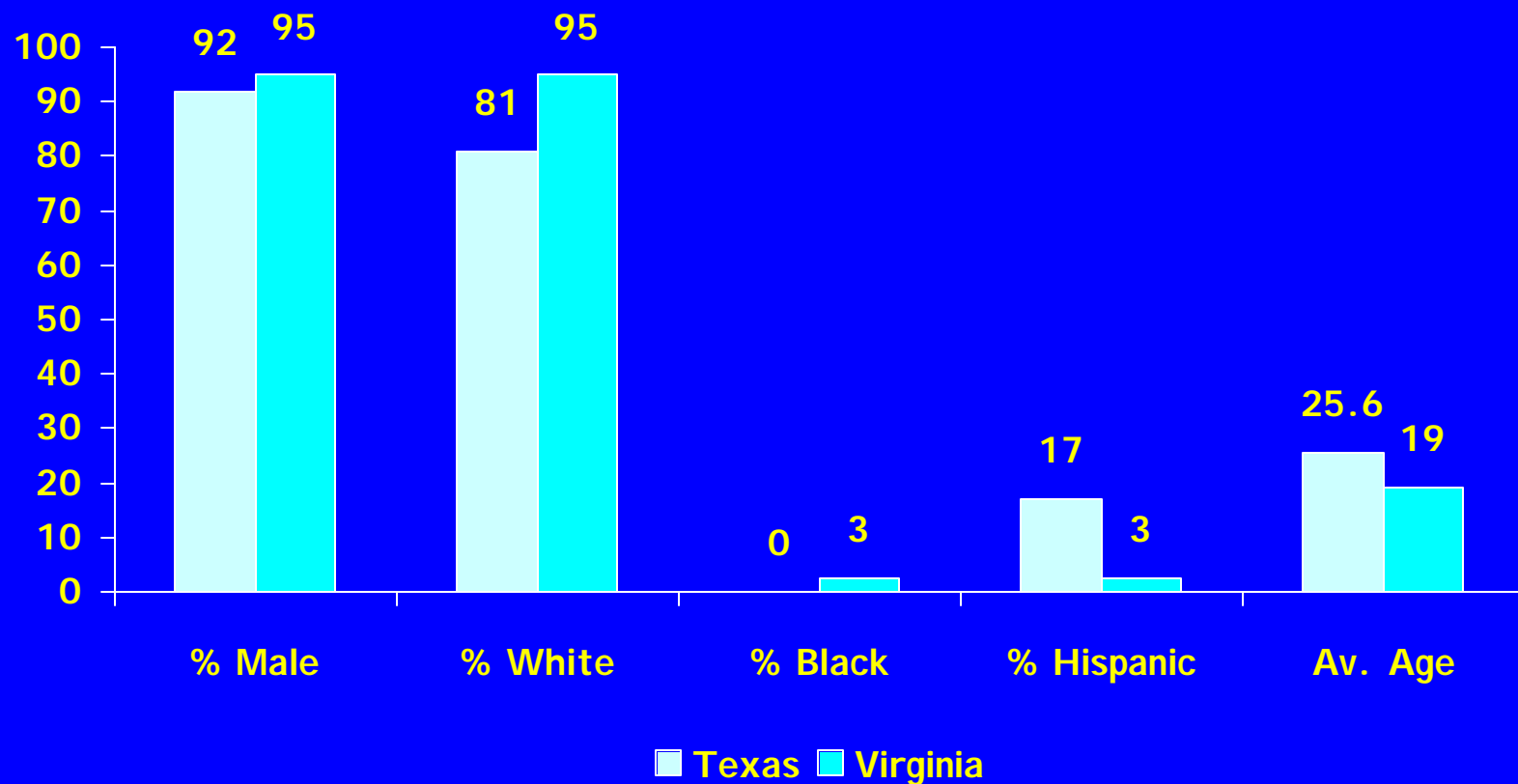


# US DAWN ED Mentions of Inhalants by Drug Use Motive: 1994-2001

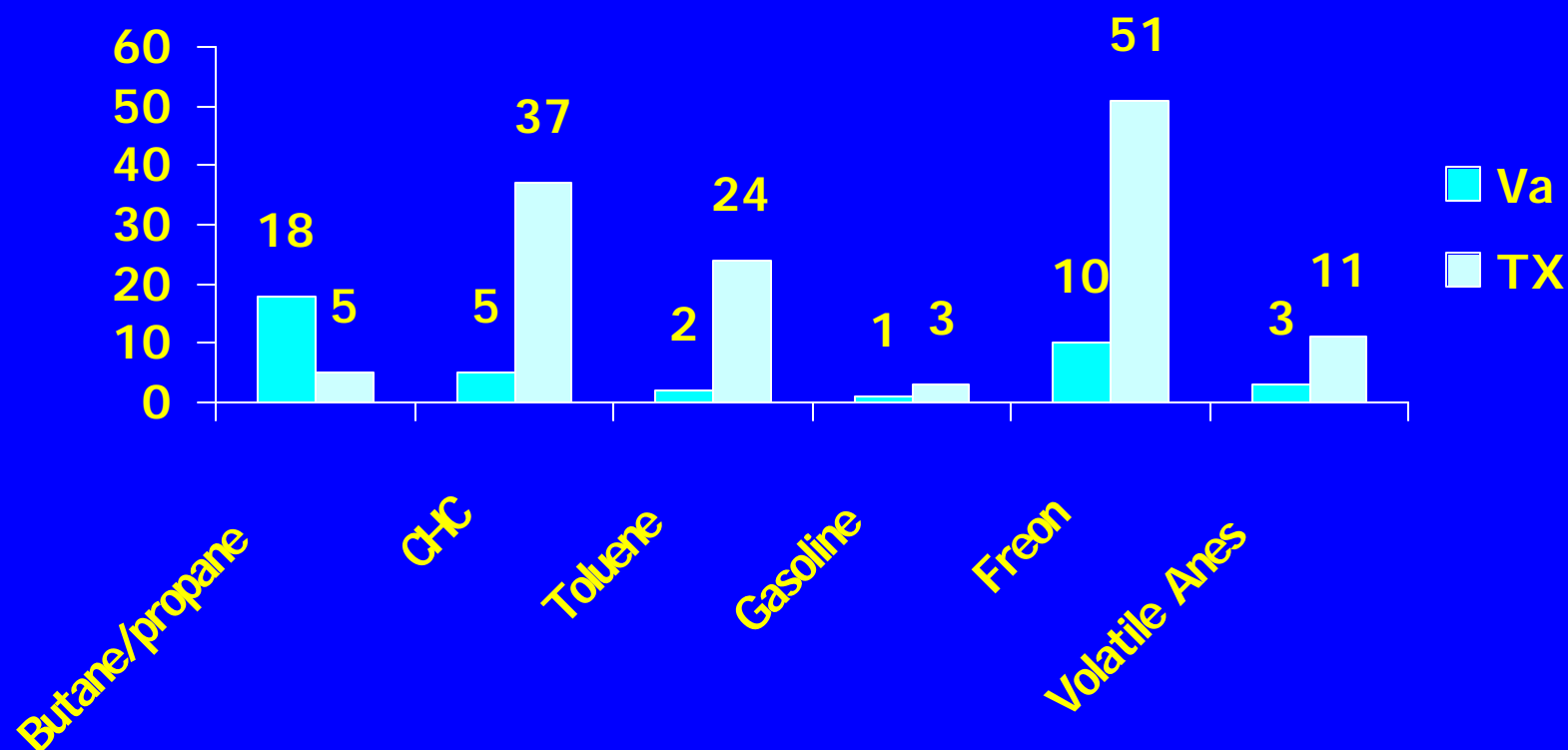


# OVERDOSE DEATH DATA

# Comparison of Characteristics of Inhalant Decedents: Virginia 1987-1996 and Texas 1988-1998

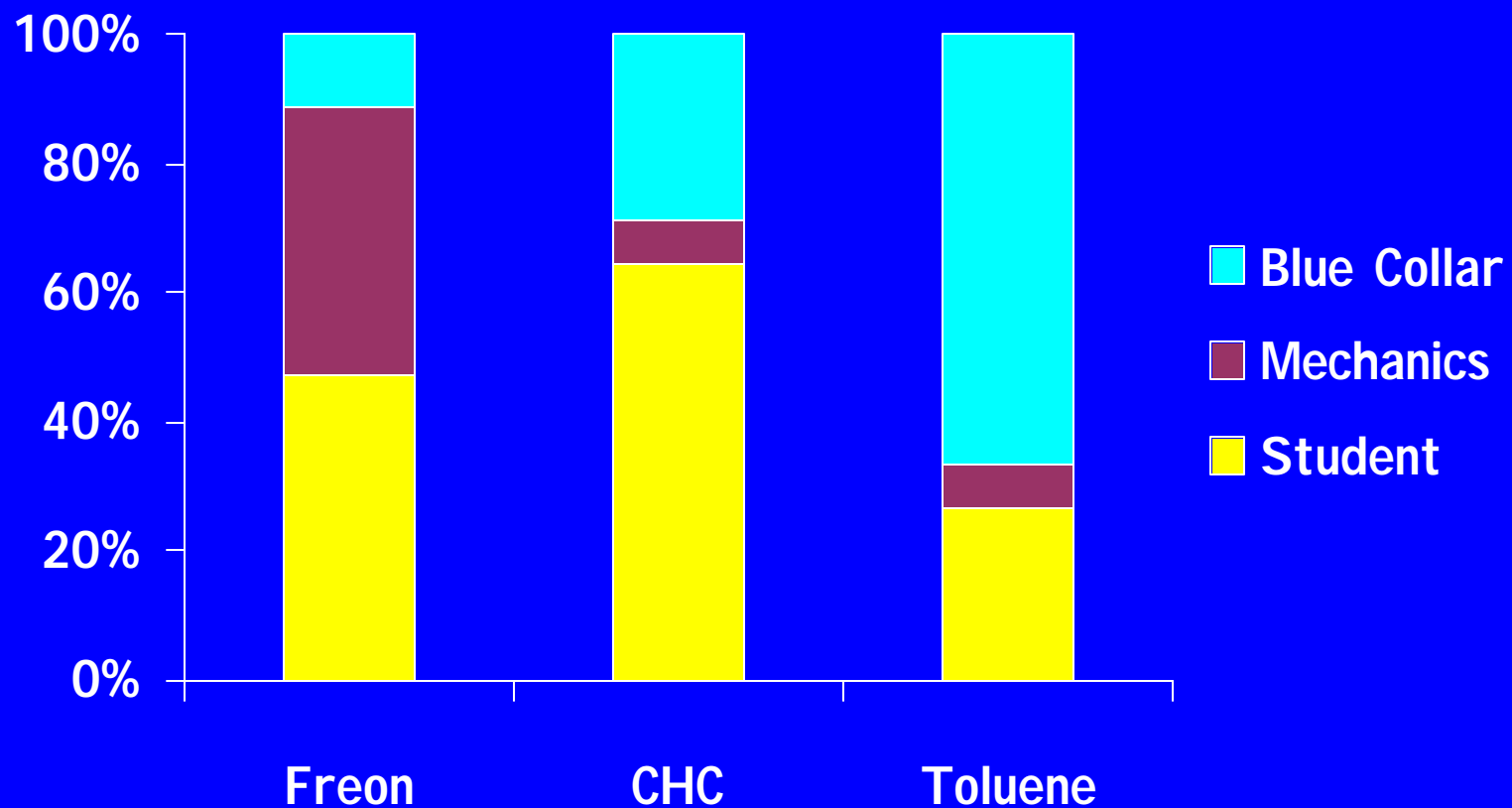


## Deaths Associated with Inhalant Abuse in Virginia 1987-1996 and Texas 1988-1998



Bowen SE, Daniel J, Balster RE, "Deaths associated with inhalant abuse in Virginia from 1987-1996," Drug and Alcohol Dependence 53 (1999) 239-245 and Maxwell JC, "Deaths related to the inhalation of volatile substances in Texas: 1988-1998, American Journal of Drug and Alcohol Abuse 27, 2001, 689-698. 36

# Occupation by Type of Inhalant Mention, Texas Deaths: 1988-1998



Maxwell JC, "Deaths related to the inhalation of volatile substances in Texas: 1988-1998, American Journal of Drug and Alcohol Abuse 27, 2001, 689-698.

# TEXAS PRISON & REFORM SCHOOL SURVEYS

# SOURCES

- Maxwell, J. C. and Spence, R. T., "Inhalant Users: A Juvenile Justice Population of Special Risk," *Offender Substance Abuse Report, Volume II*, 2002.

Surveys from the Texas Commission on Alcohol and Drug Abuse  
[www.tcada.state.tx.us/research](http://www.tcada.state.tx.us/research)

- Substance Use and Delinquency Among Youths Entering Texas Youth Commission Facilities: 2000-2001

- Substance Use Among Offenders Entering the Texas Department of Criminal Justice-Substance Abuse Felony Punishment Facilities, 1998-2000

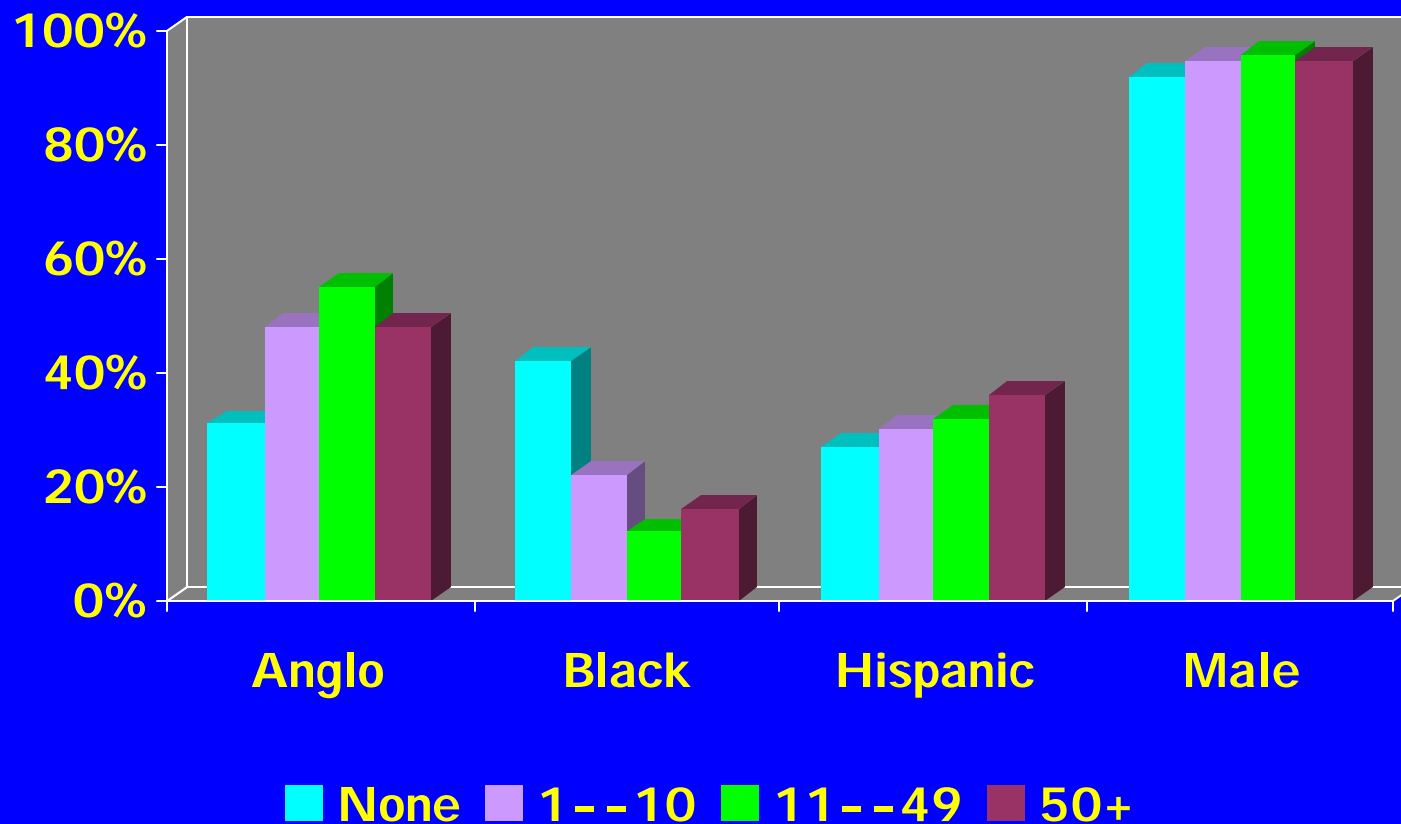
- Substance Use Among Female Inmates Entering the Texas Department of Criminal Justice-Institutional Division, 1998

- Substance Use Among Male Inmates: Texas Department of Criminal Justice-Institutional Division, 1998

- Substance Use Among Female Inmates: Texas Department of Criminal Justice-State Jail Division, 1998

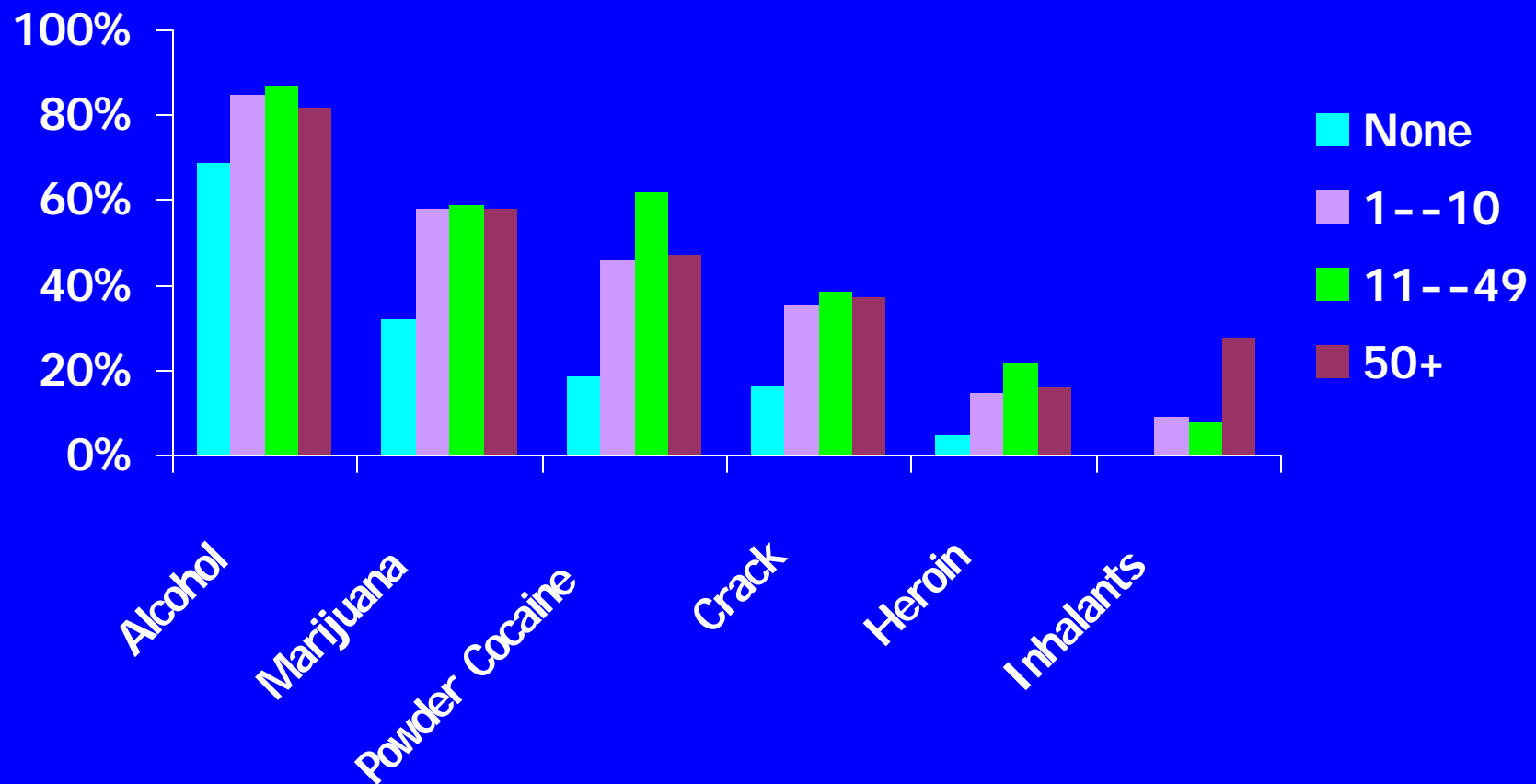
- Substance Use Among Male Inmates: Texas Department of Criminal Justice-State Jail Division, 1998

# Characteristics of TDCJ Adults by Number of Times Inhaled

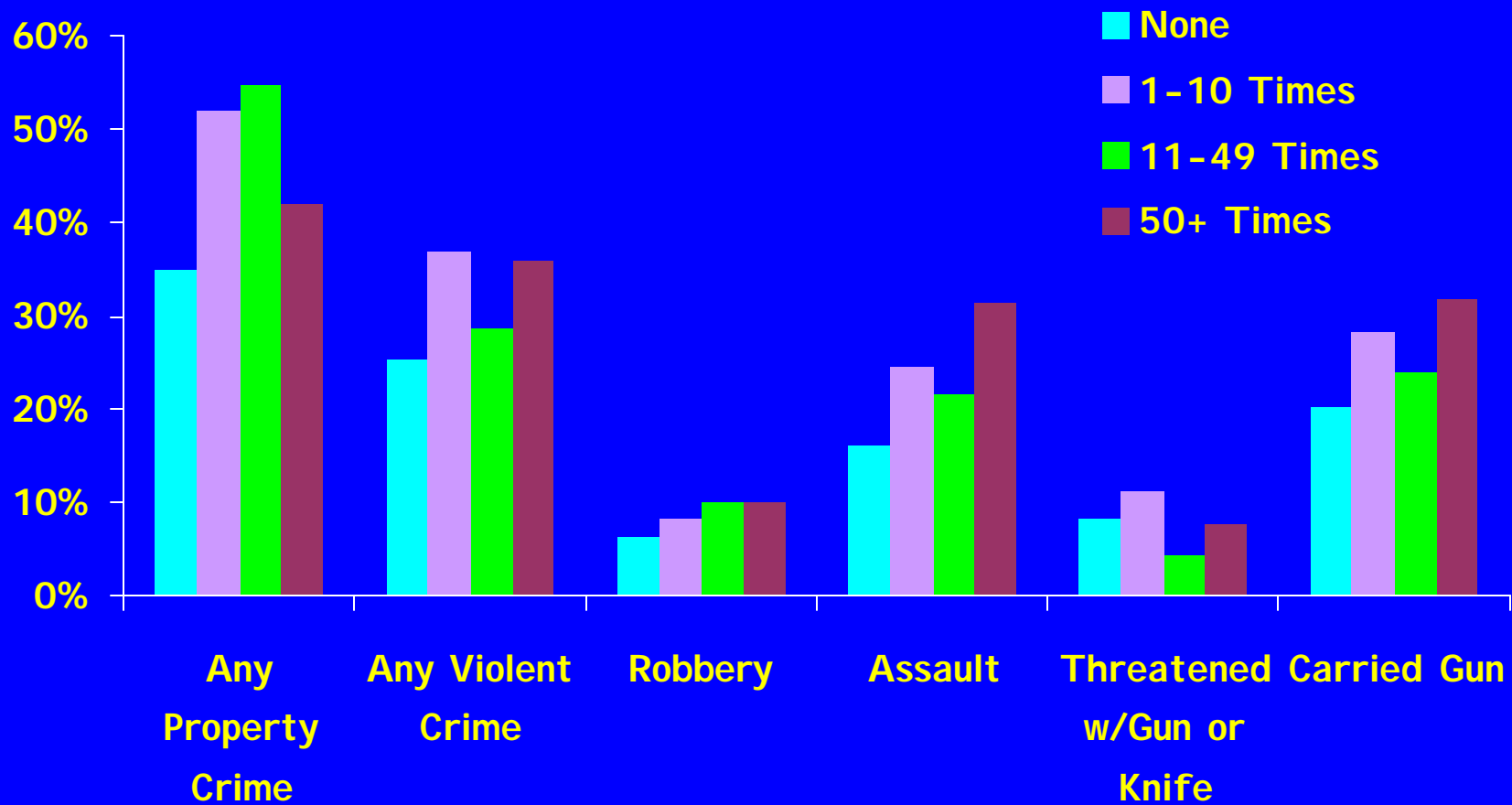




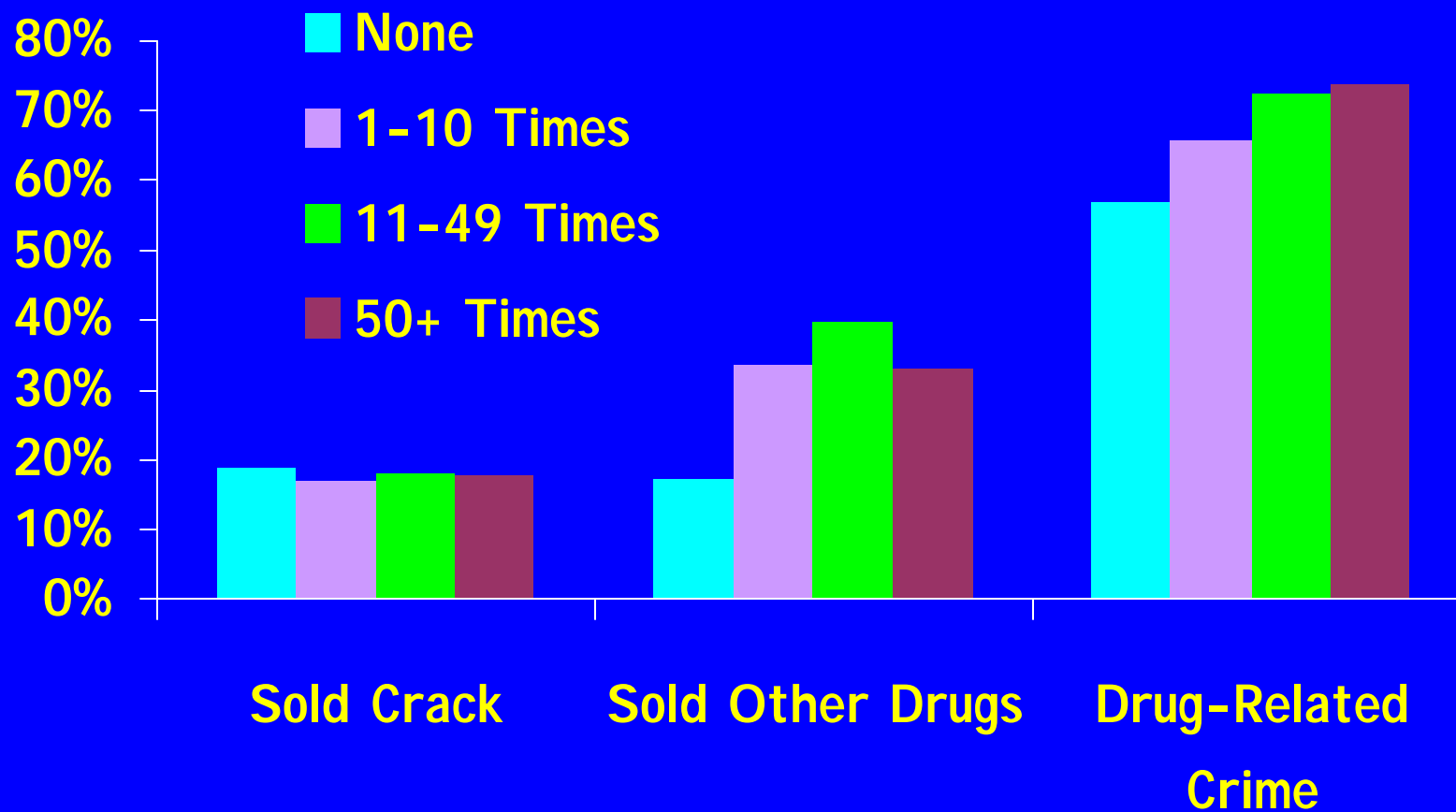
# Past Year Use of Drugs Prior to Incarceration Based on # Times Used Inhalants: TDCJ



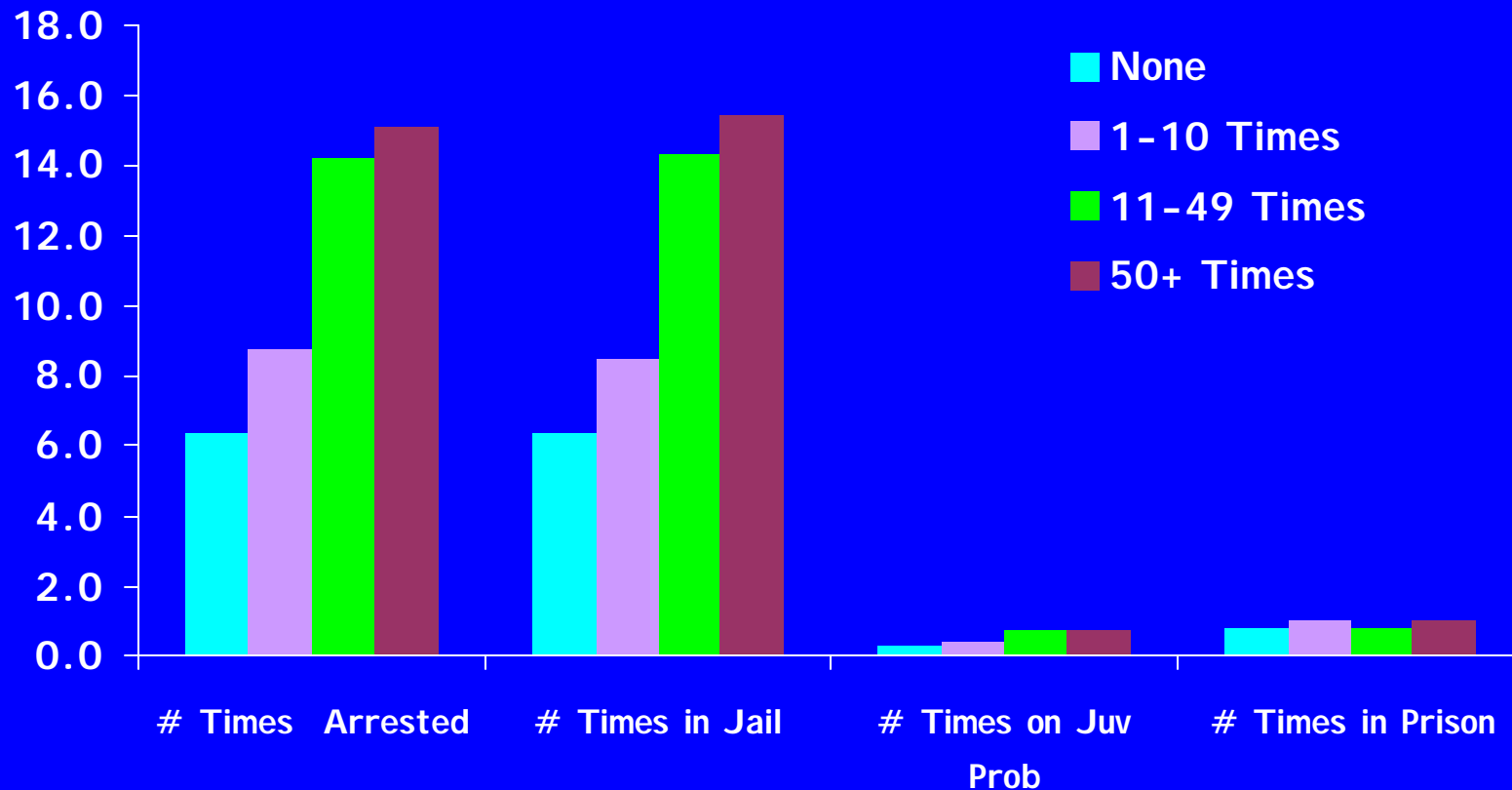
# Past Year Crimes Prior to Incarceration Committed by TDCJ Adults by Number of Times Inhaled



# Past Year Crimes Prior to Incarceration Committed by TDCJ Adults by Number of Times Inhaled



# Criminal History of TDCJ Adults by Number of Times Inhaled



## **Adult TDCJ inhalers were significantly more likely\* than non-inhalers to:**

- To have run away from home and to have been physically abused as a youth
- To have lived with a partner with both substance abuse and psychological problems
- To be depressed and have more mental health problems
- To be at greater risk of HIV and AIDS

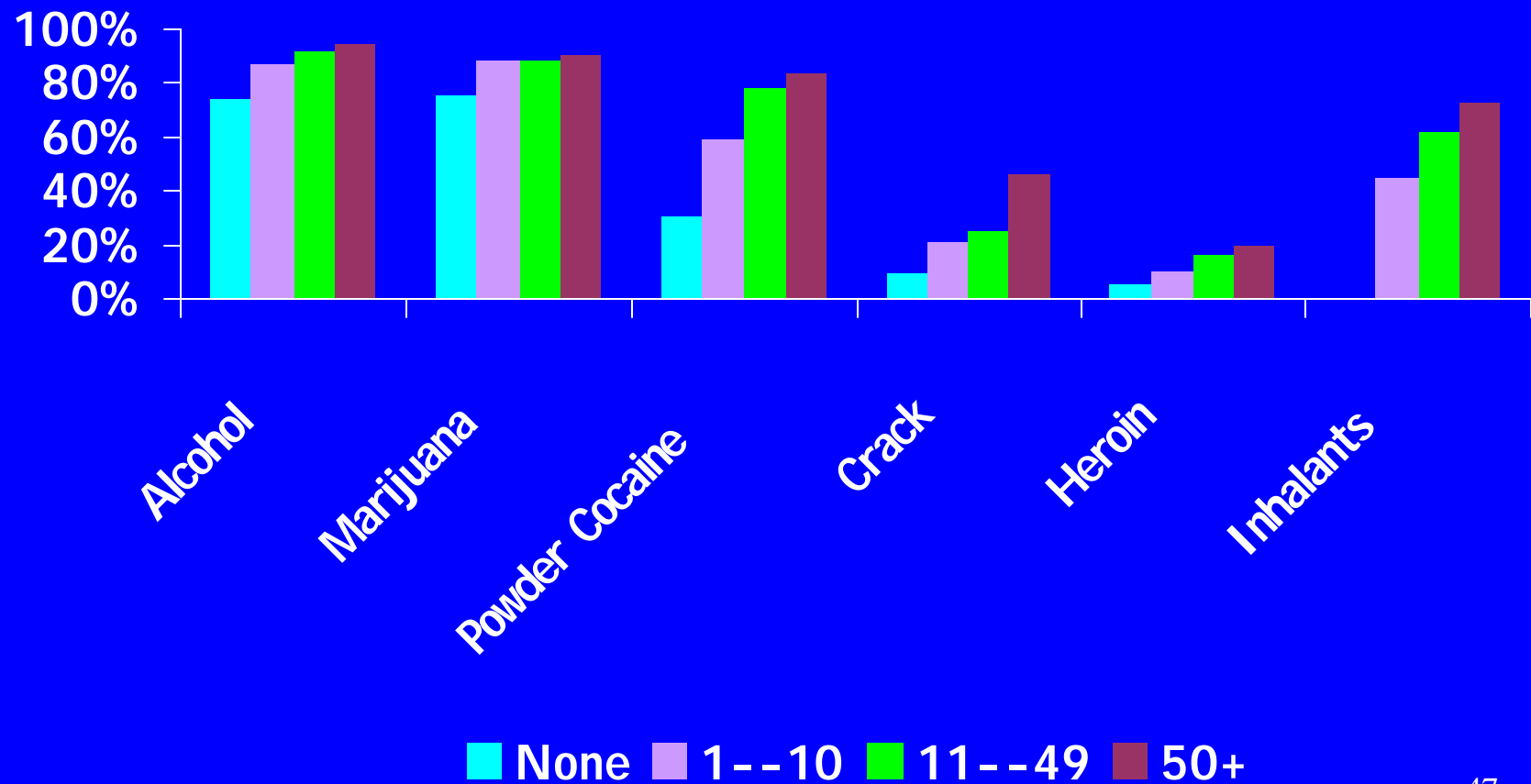
\* $p < .0001$

**Adult TDCJ inhalers were significantly more likely\* than non-inhalers to:**

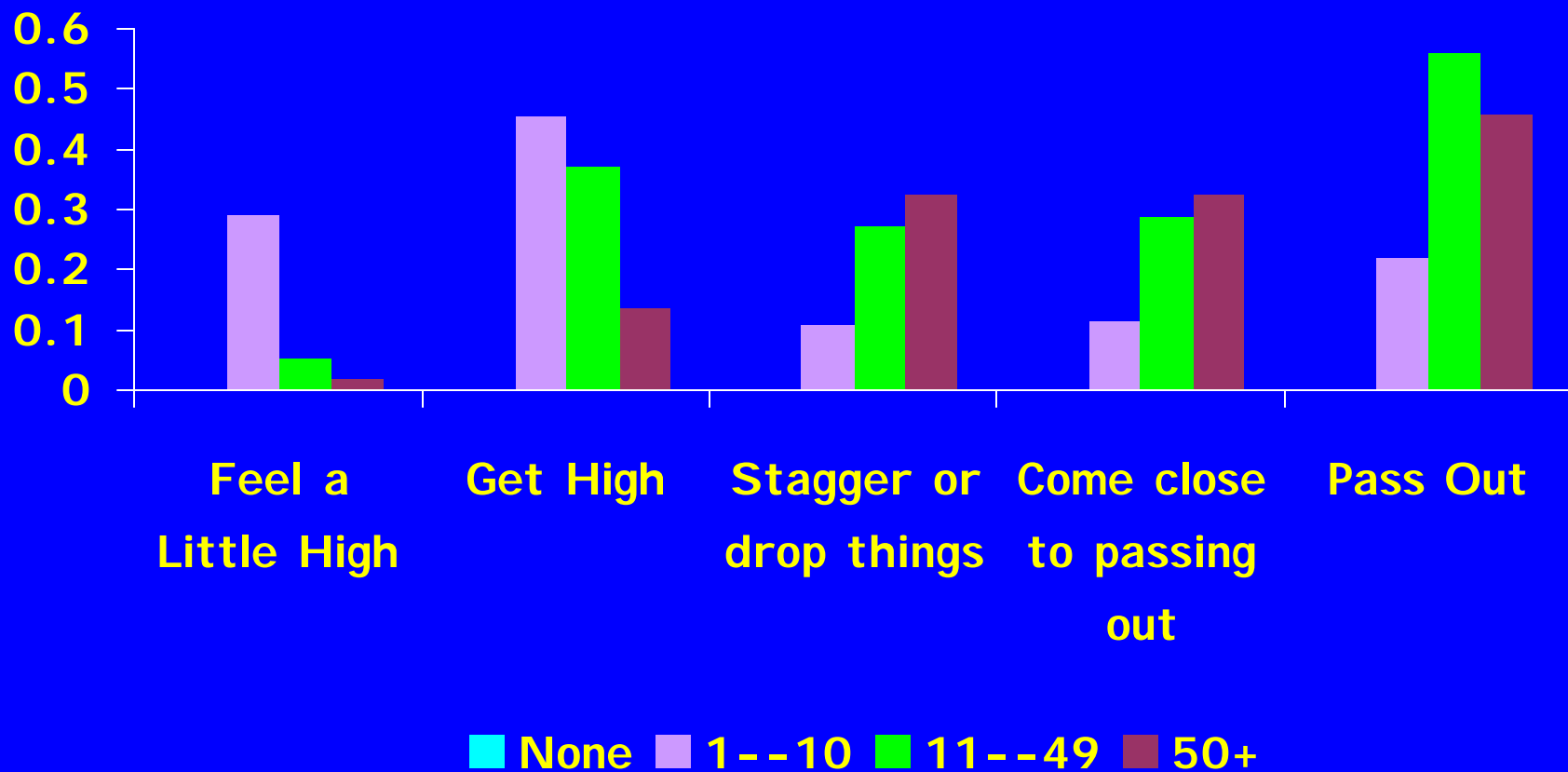
- To have committed more property, violent, drug & sex crimes in the past year
- To have been drunk or high on inhalants, cocaine, uppers, heroin or pot when committed the crime
- To belong to a gang and as a member sold pot or cocaine

\*p<.0001

# Past Year Use of Drugs Prior to Incarceration Based on # Times Used Inhalants: TYC

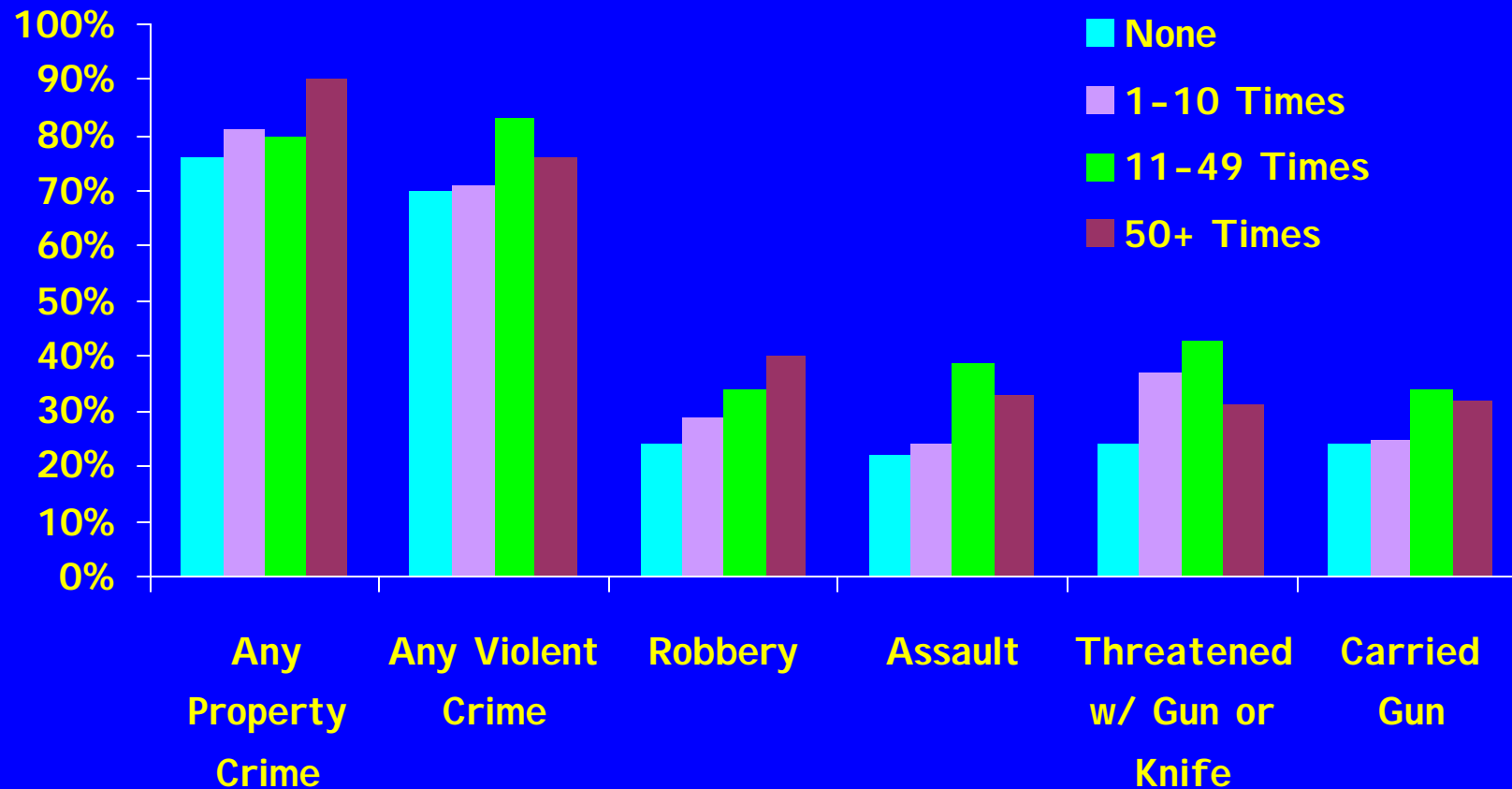


# TYC: How much did you usually inhale? Enough to ...

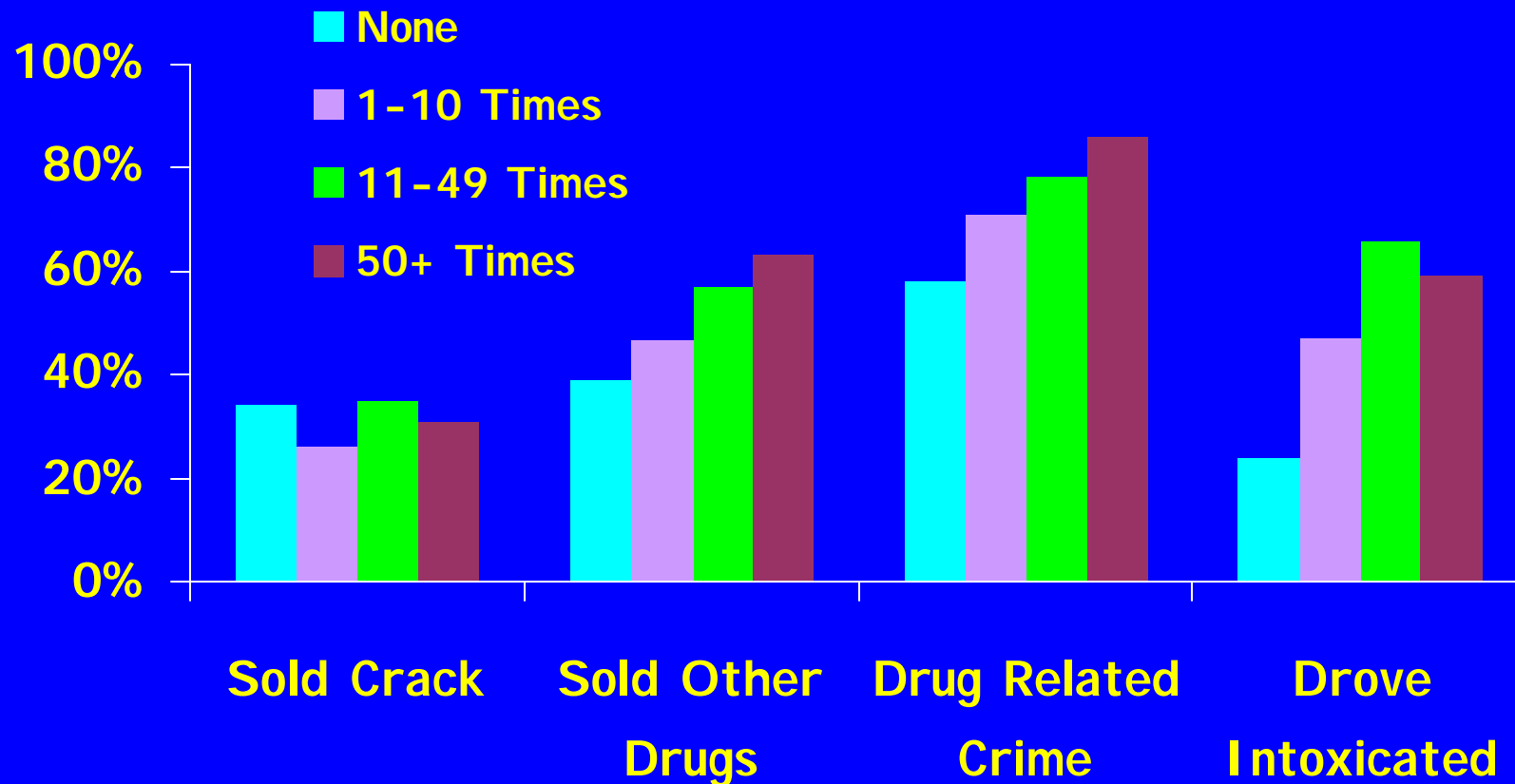




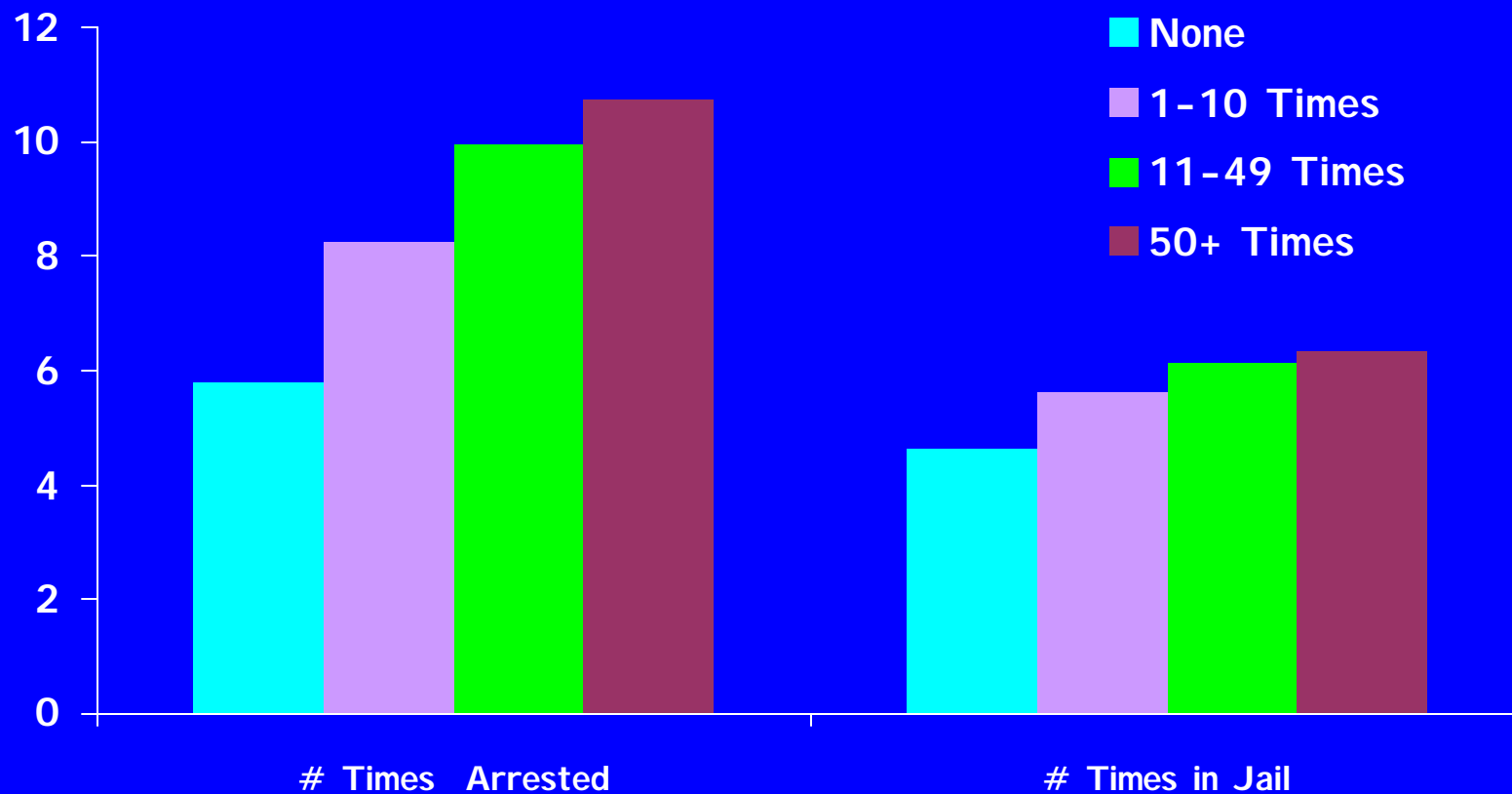
# Past Year Crimes Committed by TYC Youth Prior to Incarceration by Number of Times Inhaled



# Past Year Crimes Committed by TYC Youth Prior to Incarceration by Number of Times Inhaled



# Criminal History of TYC Youth by Number of Times Inhaled



## Youth TYC inhalers were significantly more likely\* than non-inhalers to:

- More likely to have been abused as children
- To be at risk of HIV/AIDS
- To be depressed, suicidal, or have other mental health problems
- To have ever been in a gang
- To have driven while intoxicated
- To have committed a drug-related crime
- \* $p < .0001$

# Treatment Implications

- Protocols evolving—see Draft Inhalant Treatment Guidelines at <http://www.inhalants.org>
- Standard treatment generally ineffective
- Transient v. chronic users?
- Medical screening for organ impairment
- Neurological/behavioral impairments
- Use of other drugs and alcohol?

- Long-term detox to clear solvent toxins in fatty cells which affect cognitive functioning so can participate in treatment
- Treatment may take 90-120 days
- May not be appropriate for group or talk therapy
- Neurocognitive rehabilitation?
- Impaired decision-making skills
- Family involvement & inhalant history
- Peer group history